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Navy Safety Center Data on the Effects of Fire Protection Systems on Electrical Equipment

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Robert S. Levine

**U.S. DEPARTMENT OF COMMERCE
National Institute of Standards
and Technology
Building and Fire Research Laboratory
Gaithersburg, MD 20899**

**Sponsored by:
Nuclear Regulatory Commission
Washington, DC**

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NAVY SAFETY CENTER DATA ON THE EFFECTS OF FIRE PROTECTION SYSTEMS
ON ELECTRICAL EQUIPMENT

NRC GENERIC ISSUE 57

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SAFETY CENTER DATA ON THE EFFECTS OF FIRE PROTECTION SYSTEMS
ON ELECTRICAL EQUIPMENT
AND GENERAL ISSUES

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Navy Safety Center Data on the Effects of Fire Protection Systems on
Electrical Equipment

Final Report to Nuclear Regulatory Commission - Generic Issue 57

By: Robert S. Levine
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I. Abstract:

Records of the Navy Safety Center, Norfolk, Va. were reviewed to find data relevant to inadvertant operation of installed Fire Protection Systems (FPS) in civilian Nuclear power plants. Navy data show that the incidence of "collateral" (additional accompanying) fire or other damage by fresh water on operating electrical equipment in submarines and in shore facilities is about the same as the civilian experience, about 30%. Aboard surface ships, however, the collateral damage incidence is much lower, about 15%. With sea water, the collateral damage incidence is at least 75%. It is concluded that the fire extinguisher water has to be contaminated, for instance by rust in sprinkler systems or deposited salt spray, for most collateral damage to occur.

Reasons for inadvertant operation (or advertant operation) of FPS systems at shore facilities, submarines, and surface ships resemble those for nuclear power plants. Mechanical or electrical failures lead the list, followed by mishaps during maintainance. Detector and alarm system failures are significant problems at navy shore facilities, and significant at nuclear power plants. Ships and submarines have few automatic FPS systems, so this kind of failure is not significant. Prompt action with a portable CO₂ extinguisher is usually effective.

Fixed halon and CO₂ systems in shore facilities cause no collateral damage.

Lists of individual Navy incidents with water and with halon and carbon dioxide are included as appendices to this report.

II: Introduction and Significance.

Reference (1) lists instances of inadvertant operation of installed fire protection systems in US commercial nuclear power plants. About 30% of these incidents, if they involve water systems, cause collateral damage, even, when the water contacts operating electrical equipment, fire. This may damage safety circuits or equipment. Collateral damage is rare for CO₂ systems, and non-existent for halon systems (2).

There is not a consistent set of reasons to account for the inadvertant FPS operation, although malfunctioning detector systems are sometimes involved.

Since the incidence of these mishaps is significant, the U.S. Nuclear Regulatory Commission is carrying out an evaluation of the effects of fire protection system actuation on safety related equipment. The purposes of the study related in this report are to enrich the list of reasons for inadvertant operation of fire protection systems, based on Navy experience, and to derive relevant information on the effects of fire suppressants on equipment.

Naval vessels resemble nuclear power plants in two respects. There is a large amount of installed electrical equipment, cabinets and switchboards, and there are numerous opportunities for these to make contact with water.

There are significant differences, too, between naval vessels and nuclear power plants. Generally fire extinguishment is carried out manually aboard ship by trained naval personnel. They first use CO₂ extinguishers and then, if the CO₂ is not adequate, water and/or dry chemicals applied through hoses. The water may come from a potable water main used for other purposes, but sometimes sea water is used. Sprinkler systems are rarely installed on Navy vessels. Similarly, automatic detector-alarm systems are not widely used, so we have little additional data from ships and submarines. The Navy historically depends on the presence of personnel in most spaces to observe any fire event, and to take early action. This situation is changing to a degree as new ship designs require smaller crews. Thus some spaces may not be manned in the future, and detectors and automatic systems may be more widely used on surface vessels and submarines.

III: Preliminary Discussion with Navy Experts

The method of search was first to query expert Navy sources on their experience, then search the records of the Navy Safety Center. The results obtained were discussed with relevant civilian experts. Each of these steps will be discussed in turn.

Two groups of Navy experts were queried. The first group was Dr. Homer Carhart and Dr. Frederick Williams of the Navy Technology Center for Safety and Survivability of the Naval Research Laboratory. They are responsible for research in fire and damage control. Some years ago a contractor to the Navy

visited ships where mishaps had been reported to interview the personnel involved. The author compared the unpublished report that resulted with data from the Navy Safety Center. The narratives in the report do not seem more complete than the narratives in the Navy Safety Center records, lending confidence in the Navy reporting system.

The second group of Navy experts was the NAVSEA Fire Protection Division. This unit designs and specifies fire safety provisions for Navy ships. The author discussed nuclear power plant incidents with Mr. Robert Darwin, chief of that division. One Navy action that may be of interest is that they intend to backfit ships with hand-held 20 pound Halon 1211 fire extinguishers. These are very effective, cause no collateral damage, and because they seldom would be used, would have little impact on the Earth's ozone layer.

Despite its reluctance to install automated systems, the Navy does have automatic deluge systems in munitions magazines. These are designed to keep the munitions cool. They are actuated by a thermo-pneumatic (non-electronic) system, where an increase in air pressure caused by heating a tubular volume actuates a valve. Despite the intent to make these systems insensitive to the usual causes of false alarms, they have been actuated inadvertently due to faulty maintenance.

The fresh water fire main on a ship is really a general purpose water main. Therefore, there are pressure surges in the main, and where installed sprinkler systems have been used, these surges sometimes caused valves to open. This has also happened in a nuclear power plant, where the water hammer as the line was pressurized caused water discharge (3).

Mr. Darwin stated that the choice of detectors is a key factor in avoiding unwanted discharge. There are detector designs that are very false alarm resistant. Typically these require two independent signals to confirm a fire. For instance, one design uses a response in the short wave length "solar blind" ultra-violet plus flicker in the infra-red. Both must occur. A welding arc, or lightning, could set off the first, but would not be likely to cause a sustained infra-red flicker. However, these detectors are expensive.

False alarms cause trouble. Naval personnel are likely to remove or deactivate a detector after the second false alarm. Generally, the Navy will not trust a detector to cause flow, but they may use it to dispatch a person to the site to investigate.

Mr. Darwin suggested we characterize whether the fault causing inadvertent operation is in the detector system, or in the mechanical system. Mr. Darwin also suggested querying the members of the NFPA 13 committee for their experience. NFPA (National Fire Protection Association) 13 is the standard for the installation, maintenance and use of sprinkler systems. He also referenced a presentation at a recent NFPA meeting, on inadvertent trips of fixed systems (see below).

IV Results from the Navy Safety Center.

The Navy Safety Center, located at the Naval Air Station, Norfolk, VA, collects safety-related mishap data from the Navy, and since 1984 from the other uniformed services. The center has three separate sets of programs.

A - Shore Facilities. This includes warehouses, hangers, shops, etc. The contact is Mr. Vincent Lisa, 804-444-1187. The commander is Capt. R. D. Shoop, Jr.

B - Surface Ships. This includes pierside and yard maintenance, as well as ships underway. The contact is Mr. Alvin Becker, 804-444-1563. The commander is Capt. P. K. Glasier.

C - Submarines. Again this includes pierside and other maintenance. The contact is Lt. Comdr. Greg Hempen, 804-444-5092. The commander is Capt. J. M. Rushing.

Each program has a separate Navy instruction on what to report and how to report it. For this reason the three sets of data are coded differently for retrieval.

The Shore Division instruction is OPNAVINST 5102.1C, dated 3 March 1989, as modified by a 22 May 1990 revision. This instruction includes the following:

"1) a DOD Fire Incident Report, DD Form 2324, will be submitted within 14 working days when:

- (i) The ship is berthed at a shore facility and another Fire Department helps,
- (h) --operation of an automatic sprinkler system or other fixed extinguishing system as a result of a fire, or operation of an automatic sprinkler system or other fixed extinguishing systems at a DOD Installation for reasons other than fire, if damage results from such operation.
- (o) Exclusions:
 - 4. Operation of extinguishing systems on ships."

Other parts of the instruction caution that the type of material first ignited is often not the most sensitive material; requires that the avenue of flame travel be described, as well as the kind of agent and quantity used. In perusing a number of incidents, the author found that this designated data was usually useful to aid the Safety Center personnel to assign key words for retrieval. The instructions all call for a "Narrative", and these seem to be written by someone who is knowledgeable and is sensitive to the causal concerns important to this project. The one weak link is that the narrative writer sometimes does not make it clear whether fresh water or salt water was used. Generally this is apparent from the context of the event.

It was necessary to work at a computer terminal with the help of each of the

key personnel above to derive a set of key words to yield the data desired. "Fire" was one key word, of course. "Narrative" statements were asked for and in some cases, additional data. In all cases an identification number that incorporates the date of the incident accompanies the computer printout. Although it is possible that some relevant cases were missed, the total number of cases was large. On the order of 100 cases were queried initially in each category, so the results are thought to be meaningful to the goals of the project. Late in the project, when additional experience on Halon and carbon dioxide systems was desired, shore facility data back to 1980 (about 500 more cases) were obtained.

V) Findings--Technical Results

Findings are presented here in three categories: "Reasons for Fire and Firex Mishaps", "Incidence of Collateral Damage by Water From Firex Systems" and "Incidence of Collateral Damage By Halon or Carbon Dioxide Systems". The appendices to this report list one year of inadvertant (no fire) incidents from shore facilities, 43 years of submarine incidents, 8 years of ship incidents, and 11 years of inadvertant halon and CO₂ system operation in shore facilities.

(A) Reasons for Fire and Fire Protective System Mishaps:

Table 1 summarizes the Navy Safety Center Data, and compares it to NRC data from nuclear power plants.

It is seen that actuation by human error and by false alarms are minor considerations in the problem of advertant or inadvertant operation of fire protective systems, 8% to 14%, except for submarines. This is true for both Navy experience and nuclear power plant experience, and is different than the experience and opinions of civilian fire protection engineers (4). Of course, in the surface ship and submarine data there are few fixed extinguishing systems, so there is little chance for this problem to occur.

Leaky pipes, for active sprinkler systems, most because of patches or attachment of branch lines, are a small but significant problem (about 10%). Considering that the hardware technology for installed systems is mature, this is surprising.

The big problems are malfunctioning of equipment (25-50%) and mistakes during maintenance (20-50% of the cases). Obviously, if equipment rarely malfunctioned, there would be little need for FPS. A system with no other problems would show that equipment malfunctions would be 100% of the reasons for mishaps. So ship systems (49% malfunctions) are as good as those in nuclear power plants (48% malfunctions). By this reasoning, submarines (35% equipment malfunctions) and shore facilities (26%) have a larger share of "other problems". The other problems are primarily maintenance. Only 19% of the nuclear power plant mishaps are caused during maintenance, but 51% of the submarine mishaps and 34% of the ship problems are maintenance.

In one way the submarine situation can be classed as a testimony to excellent equipment reliability. It took 43 years to accumulate 95 fire-related incidents. The 42 nuclear power plant incidents occurred during 10 years, the 112 ship incidents in 8 years, and 68 shore facility incidents in one year.

The author's conclusions from these data are that the Naval vessels do resemble nuclear power plants, but that maintenance mishaps are less likely in nuclear power plants.

(B) Incidence of Collateral Damage by Water from Fire Protection Systems.

A summary of damage when water comes into contact with operational equipment, is shown in Table 2. First of all, it should be noted that damage is highly likely when sea water is involved (75% damage). However, even though there are ways that fresh water on Navy ships can pick up some salt from the surfaces of equipment, fresh water on Navy ships is less than half as likely to cause trouble as fresh water in nuclear power plants (15% vs 30%). The incidence on submarines shows as 28%, but there are only 5 cases, and the writer's criteria were very conservative. For instance, included is a case where steam cleaning a generator caused a fire. This was ascribed to fresh water even though there was obviously dirt on the generator that was blown into it.

The Philadelphia Naval Shipyard has a particularly successful record of refurbishing electrical equipment that had been wet with water. The superintendent of the electrical shop (5) said that he could not remember a case where a shorting-electrical problem had been caused by fresh water. The only problem experienced at the shipyard with fresh water was corrosion if drying the equipment was delayed. This was blamed on salt that had been deposited on the equipment. The superintendent suggested that the water in the nuclear power plant fire protection systems was contaminated.

It is well known that sprinkler systems are likely to have substantial amounts of rust and other contaminants in them. This can contact energized electrical equipment when the system is discharged. Sprinkler systems are tested with water when installed, then closed up. The NFPA standard calls for flushing once a year, but even in a year rust can occur.

When fresh water is used for fire fighting aboard ships, it comes from a potable water main. The water quality meets Bureau of Medicine criteria. It is distilled aboard ship, then stored in a lined steel tank and distributed in copper or cupro-nickel pipe (6). From 0.2 to 2.0 ppm of elemental bromine are added, depending on the purity of the original sea water (7). The final water contains less than 10 ppm of dissolved solids. When this water is used on a fire, it is discharged through rubber lined hose which, of course, adds no rust.

(C) Incidents of Inadvertant Operation of Halon and Carbon Dioxide Systems.

As mentioned above, 11 years of Navy Safety Center data on inadvertant discharges of halon and CO₂ have been obtained and examined. This additional data are valuable because there are only 17 such events in nuclear power plants, and additional data aid in assigning a not overly conservative probability of collateral damage. The table below summarizes the data:

<u>Year</u>	<u>Halon cases</u>	<u>Damage?</u>	<u>CO₂ cases</u>	<u>Damage?</u>
1990	14	no	4	no
1989	24	no	1	no
1988	18	no	2	no
1987	18	no	3	no
1986	13	no	5	no
1985	23	no	1	no
1984	6	no	3	no
1983	1	no	4	no
1982	0	-	2	no
1981	0	-	2	no
1980	1	no	5	no
<u>Totals</u>	<u>118</u>		<u>32</u>	

It can be seen that no collateral damage occurred as a result of Halon or CO₂ discharges. The reason for few data on halon systems prior to 1985 is that the Navy decision to use halon was made about 1980, and some time was then required to design and install systems.

(VI) Conclusions

The reasons for inadvertant operation of installed fire protection systems contained in the Navy Safety Center Data resemble those for nuclear power plants. Therefore there is support for utilizing this experience in an analysis of the probability that damage from inadvertant operation can occur in nuclear power plants (NRC Generic Issue 57).

Examination of the incidence of collateral damage, including fire, that can occur when water used in protection systems makes contacts with operating electrical equipment shows that Navy shore facilities are similar to nuclear power plants (30%), but that ships have only about half the incidence of damage when fresh water is used (15%). Sea water, on the other hand, gives at least a 75% incidence of damage. Fresh water on a ship is very pure, whereas water sprinkler systems are very likely to have large amounts of rust and other impurities in the first water to be discharged. So it is concluded that a large part of the collateral damage when installed water fire protection systems are inadvertantly discharged is due to impurities in (and high conductivity of) the water.

Confirming the relatively few cases in nuclear power plants, discharge of halon or CO₂ systems in shore facilities causes no collateral damage of the kind of concern here. Because CO₂ systems can be massive, there are cases where personnel are temporarily overcome due to lack of oxygen. It is possible that an unconscious person might not be discovered in time to be rescued. The Navy data do not indicate any incidents where the chilling effect of the cold CO₂ is a factor.

VII References:

- (1) Lambright, John A., Brosseau, D., Bohn, M.P., Simion, G.P., Sattison, M., "Evaluation of Generic Issue 57, Effects of Fire Protection System Actuation on Safety-Related Equipment" NUREG/CR-5580, SAND90-1507, EGG-NTA-9081 (June 1990)
- (2) Lambright, John, Briefing Charts, GI-57, "Effects of Fire Protection System Actuation on Safety-Related Equipment" Sandia National Laboratories, June 22, 1990
- (3) NRC Information Notice 87-14, (Event occurred at Cooper Nuclear Power Station, April 4, 1984)
- (4) Personal Communication, Michael L. Brookins, Manager, Property Loss Prevention, Norfolk Southern Corp., Roanoke VA., to Robert S Levine, Memo to File Oct 11, 1990
- (5) Personal Communication, Mr. Gilbert Ward, Superintendent, Electrical Shop, Philadelphia Naval Shipyard, (215-897-3655) To Robert S. Levine, Memo to file, Dec. 14, 1990
- (6) Naval Ships Technical Manual S9086-SE-STM-010/ Chapter 533, "Potable Water Systems" (Jan. 1986)
- (7) Personal Communication - Mr. Greg Johnson, Everpure Corp., Westmont Illinois, to Robert S. Levine, Memo to File "Navy Potable Water on Surface Ships" April 24, 1991

Table I
Reasons for Fire Extinguishing System Mishaps

Data Set	Human Error	Detector/ Alarm Failure	Water Leaks	Mechanical Electrical Equip. Fail.	Errors During Maintenance	Nearby Construction	False Alarms
Submarines 1947-90	0	0	10 (10%)	33 (35%)	51 (54%)	0	1 (1%)
Surface Ships 1980-90	7 (4 arson) (6%)	0	5 (4%)	58 (49%)	40 (34%)	6 (5%)	3 (2%)
Shore Facilities 1990	3 (4%)	24 (35%)	7 (10%)	18 (26%)	5 (7%)	8 (12%)	3 (4%)
Shore Facilities w/o Detector Failures	(7%)	-	(23%)	(41%)	(11%)	(18%)	(7%)
Nuclear Power Plants*	1 (2%)	5 (12%)	3 (7%)	20 (48%)	8 (19%)	2 (5%)	3 (7%)

* From USNRC Issued Information Notices Referenced in the Fire Risk Scoping Study

Table II
Collateral Damage by Water from Fire Extinguishing Systems
Summary Sheet - Number of Cases

<u>Data Set</u>	<u>Fresh Water</u>		<u>Sea Water</u>	
	<u>Damage</u>	<u>No Damage</u>	<u>Damage</u>	<u>No Damage</u>
Submarines 1973-90	5(28%)	13	21(78%)	6
Surface Ships 1980-90	2(15%)	11	11(73%)	4
Shore Facilities 1990	9(20%) (Includes Flooding)	37	0	0
Nuclear Power Plants*	36(32%)	75	0	0

* Tables 2.1 and 2.6, NUREG / CR-5580. Does not include wetting filters as collateral damage.

Relevant Naval Safety System Mishaps

I. Shore Facilities

<u>Record I.D.</u>	<u>Reason</u>
90010290600	Slow leak in Deluge System
90011691600	Condensation in Pneumatic System
90012392000	Defective Control Valve in Deluge System
90012590200	Defective Sprinkler Head
90020290800	Broken Sprinkler Pipe
90020791100	Patch Pipe Sleeve Failed
90021190100	Operated Pull Box by Mistake
90021290400	Sprinkler Head Link Failed
90021590200	UV Detector Saw Lightning
90021591000	Relief Valve Froze - Housing Cracked
90021890200	False Alarm from Heat Detector
90021891200	Used Cigarette Lighter to Locate Switch
90022491100	Opened Doors - Temp. Change Detected
90022690100	Sprinkler Head Broken by Lift Truck
90022790600	Frozen Pipe Above Sprinkler Head
90031590300	Bad Packing - OS&Y Valve
90031290900	Hoister Hit & Fractured Sprinkler Pipe
90031490900	Construction Crew Broke Sprinkler Pipe
90031991000	Ran Fork Lift into Sprinkler Pipe
90032191600	Faulty Rate of Rise Detector
90032490200	System Activated by Persons Pulling Cable
90032590600	Switch Operated when Power Off - Then Power Came On
90033090400	Defective Link in Sprinkler Head
90040991800	Source of Hot Gas Actuated Sprinkler Head
90041290500	Leaky Pipe - Flooded Work Area
90041790900	Automatic Alarm - Deluge System - False Alarm
90041791500	False Alarm When Power Restored
90042190300	False Alarm - Repair Technician Error
90042990700	False Alarm - No Cause Found
90050190700	Alarm System Pressure Switch Sensed Hose Motion
90050490200	Leak Through Sprinkler Branch Line Connection
90050491200	Maintenance on System Activated It
90050591200	Overheating of 2 Heads by Incinerator
90050790100	A/C Element Overheated - Produced Smoke
90050791500	Switch Pushed by Mistake During Maintenance
90050991600	No Cause Found, Deluge Abort System Not Working
90051690300	Smoke Detector Actuated by Maintenance Working on A/C
90051691000	One Sprinkler Head Actuated - No Reason Found
90051991000	Accidental Operation of Remote Pull Cable - Contraction
90052590900	Hot Air Leak Impinged on Sprinkler Head
90060190900	Old (1944) Sprinkler Head Failed, FD Notification Failed
90061090100	Short in Electrical Connector Activated System
90061291100	Dust from Construction Activated Smoke Detector

Relevant Navy Safety System Mishaps (Continued)

90062191100	Bad Switch on Computer Power Supply - Smoke
90062890500	Slow Leak in Deluge System
90062890600	Stove System Powder Accidentally Actuated
90070291500	Faulty Heat Detector Actuated by Engine Vibration
90071090700	Pull Box Mistakenly Actuated - Instructions in Error
90071091200	Loose Grounding Wire Shorted Others in Electrical Box
90071291200	Fusible Link Melted Over Flame Grill
90071291100	UV System Actuated During Elect. Storms & Power Failure
90071791700	Chip Actuated When Power Restored
90071890400	Forklift Hit Piping - Pump Room Locked
90071990300	Smoke from Exercise Carried to Detectors by Ducts
90072090300	Computer Power Supply Overheated
90080291200	A/C Pressure Switch Failed, Vapors Act. Smoke Detectors
90080390400	Hood Fusible Links Replaced by Lower Temp. Links
90081190500	Sprinkler Head (165°F) Actuated by Heat Below Roof
90081690100	Sprinkler Pipe Broken by Forklift
90082890800	Heat from APU Activated Heat Detector
90083090500	16 Inch Line Broke Beneath Floor when Pressurized
90090190200	Kitchen System Activated by Strain on Trip Wire
90090590600	UV Detectors Activated by Arc Welding - Construction
90091490500	Sprinkler Head Activated by Open Incinerator Door
90091790200	UV Detectors Sensed Nearby Lightning Strike
90092590100	4 Inch Sprinkler Line Coupling Failed
90092690400	Sprinkler Head Link Failed
90092890700	Dust and Humidity from A/C Startup Actuated Detector
90102590500	Power Surge Caused Fire in Motherboard Panel

Relevant Naval Safety System Mishaps

II. Submarines

<u>Record ID</u>	<u>Reason</u>
730711D1701	Acetone Used to Clean Tank - Ignited by Broken Light
900911B0101	Hot Work in Navy Yard - Ignited Debris
891119B0601	Hot Work in Navy Yard - Ignited Protective Cover
890925B0901	Hot Work in Navy Yard - Ignited Wire Bundle
890728B1301	Hot Work in Navy Yard - Ignited Litter
890329B3001	Antifreeze Leaked Thru Valve into Breakers
881117B2201	Water (Salt?) Leaked onto Pump Motor
880828B0901	Oil Soaked Logging on Diesel Exhaust Ignited
880424B0401	Corroded Stuffing Let Sea Water Leak on Busbars
871006B1501	Hot Work in Navy Yard - Ignited Hull Insulation
870522B3101	Amine Leaking into No. 2 CO2 Scrubber Heater Section and Ignited Fire
870218B0401	Uncontained Sparks from Grinding Ignited Hull Insulation Combustibles
870109B1401	Sparks from Welding Dropped to Engine Room and Ignited Lagging
860807B0701	Hot Slag from Carbon-Arcing Escaped and Ignited Dust and Lint Combustibles
860729B0601	Hot Slag from Burning Operations Ignited Ship Hull Insulation Combustibles
860626B5601	Welding Sparks Ignited Debris
860520B5601	Steam Wetted Condensate Pump Motor Caught Electrical Fire When it was Started
851220B0201	Condenser Sea Water Hose Broke Loose Spraying Pump Motor and Caused Electrical Fire
851104B0901	Water in the Fan Plenum Caused Electrical Fire
850511B2101	Welding Sparks Landed on Sound Silencing Material Which Started Smoldering
850505B2201	Sea Water from Bucket Accidentally Poured Over Switchboard and Caused Electrical Fire
850312B2801	Hot Slag Ignited Foam Insulation in the Engine Room
841103B0301	Welding Slag Ignited Paper Towels, Wood Insulation, and Cable Insulation of Sail Structural
841018B5301	Welding Slag Ignited Electrical Wire, Rubber Insulation, Oil Grease Inside Missile Tube
840629B0301	Hot Slag from Welding Operation Ignited Hull Insulation of Torpedo Room
840611B6801	Welder's Torch Ignited Hydraulic Oil Spraying from a Ruptured Hydraulic Oil Line
840523B4801	Welding Slag Ignited Rubber Insulation of Aux Tank
840501B2001	Welding Slag Ignited Bilge Rags in Engine Room
840330B2601	Welding Slag Ignited Bilge Rags in Torpedo Room
840321B5601	Malfunction Failure of Heater Power Indicator and Temperature Limiting Device Caused Electrical Fire
840312B0501	Slag from Grinding Ignited Oil Exposed Fiberglass Insulation Under Maneuvering Room Deck
840217B3101	Grinding Sparks Landed on Pile of Paper Towels and Caused Fire
840208B4201	Cutting Slag Ignited Flammable Material on Main Ballast Tank
840124B0401	Welding Slag Ignited Containment of Battery Well

831123B2501	Air Arc Welding Slag Ignited Paper Trash - Flame Spread to Insolite Hull Insulation and Electrical Cable
831122B2401	Hot Slag in Radio Room, Ignited Lint and Dust Accumulated in Ventilation Pipe
830901B4701	Welding Slag Ignited Vent Filters in Laundry Room
830818B5601	Heat from Hot Welding Slag Ignited Oil Soaked Lagging from Engine Room
830808B6601	Voltage Tester Probes Inadvertently Shorted Energy Terminal Lugs and Caused Switchboard Fire
830725B7001	Welder Sparks Ignited Spilled Flammable Liquid in Bow Area
830630B4701	Brine Dilution Tank Overflow, Stator Windings Shorted/Grounded and Caused Fire
830416B2701	Welding/Grinding Slag Metal or Sparks Ignited Combustibles in Sonar Dome
830202B0101	Hot Slag from Silver Brazing Ignited Cork Insulation in Operations Compartment
811216B3201	Sparks from Welding Rod Ignited Insulation in Sail Bridge Trunk
811203B0401	Carbon Arc Welding Slag Ignited Insulation in Fan Room
811021B1601	Flame from Welder's Oxygen-Acetylene Cutting Torch Ignited Bale of Kim-Wipe Paper Towels
810922B4501	Sparks from Grinding Metal Ignited Fibrous Glass in the Fan Room
810828B1001	Water Dripped into Transformers Shorted and Caused Fire in the Fan Room
810712B1201	Battery Well Ventilation Filter Fell on Heater Element and Caused Fire
801219B2401	Sparks from Grinding Ignited Insulation in Fan Room
800322B1101	Switchboard Wiring Shorted, Caused Excessive Current Draw and Electrical Fire
790417B1101	Fuel Oil Sprayed into Motor Generator Set and Caught Fire in Engine Room
790104B1001	Fire Resulted from Arcing Due to Improper Tightened Busbar in Engine Room
770712B3601	Switchboard Fire Due to Sea Water Entering from Escape Trunk Hatch Through Fasteners in Top of Panel
770118B2501	Super Structure Fire Due to Hot Slag from Welding Zincs Ignited Nylon Mooring Line
730221D0401	Welder's Sparks or Slag Fell Behind Switchboard and Ignited Oily Dust
720927D0701	Fuel Oil Pressure Gauge Line Parted, Spraying Oil Contact with the Hot Engine Exhaust Header and Started Fire in Engine Room
710621D0401	High Resistance Connector Between Busbars and Breaker was Loose and Caused Electrical Fire in Machinery Room
710609D0601	Contacts were Cocked on the Cam, Caused Arcing and Fire in the Machinery Room
710106D1001	Electrical Cable Vibrated Loose, Shorting, Arcing and Caused Fire in Engine Room
700829D0901	Improper Storage of Combustible Materials in Generator Room, Insufficient Facts to Establish Cause
700625D0201	Welding Hot Slag Fell into the Ventilation Duct and Ignited Dust and Dirt Near Intake
700416D0401	Welding Slag Ignited Plywood Disc Which Fell Down Conning Tower and Caused Fire
811128B1401	Motor Grounded from Water Spray Causing Arcing and Fire
810520B4501	Sea Water Spray from Failed Mechanical Seal Caused Pump Motor Short Out and Fire

781127B1201	High Pressure, High Temperature Brine Discharged into Pump Motor Causing Ground and Fire in Engine Room
781013B2301	Water Vented from Cooler Splashed into Motor Causing Ground and Fire in Engine Room
780228B3801	Leaking PKP Caused Commutator and Brush Arcing
770920B3701	Sea Water Leaking into Motor Casing and Windings in Engine Room
760627B1701	3000 PSI Plug Blew Out and Damaged Nearby Piping
730529D0501	Condensation Water Shorted Rings and Rotor Bars of the High Pressure Brine Pump
720531D1001	Loose Spacer in Vent Piping Fell into High Pressure Brine Pump Motor
710607D0901	Check Valve Installed in System Backwards and Caused Overpressurization of Piping
700413D0701	Improper Valves Were Installed and Resulted in Blow Off the Union Nut
900126B0401	200 Gallons of Water Spilled into AMR
860730B0401	200 Gallons of Oily Water Came into Galley and Torpedo Room Due to Failure in Flushing Line
840517B5001	Sea Water Entered Battery Well and Resulted in Battery Discharge, Explosive and Toxic Gases
840408B1601	Engine Room was Flooded from Evaporator Strainer Failure
830410B3501	Engine Room was Flooded Due to Gland Seal Supply Line Failure
821011B0101	Engine Room Flooded Due to Improper Tag Out of Condenser and Absorber of Air Conditioning System
820828B1201	Faulty Hot Water Heater Relief Valve Sticking Open and Resulted in Flooding in Storeroom
811019B4901	SD-7 Body Blew Out, Spraying Sea Water and Flooded Both the AC and DC Ends
800516B3401	Lower Level Engine Room Flooded with Sea Water Due to Undrained Waterway and Improper Fitted Plugs
800318B5001	Normally Shut Libr Condenser Drain Valve was Open, Sea Water Sprayed onto Motor Generator, Shorted the Commutator and Brush Rigging
800208B0701	Flooding AMR Lower Level Due to Flood and Drain Valve Lifted from its Seat in Ships Trim System
800103B4701	Diesel Sea Water Hull Backup Valve Could not be Shut, Flooding the Machinery Room, Shorting the Switchboard and Resulted in Switchboard Fire
790521B4701	Drain Funnel For Condenser Overflowed onto ASW Pump Room and Flooded Pump Motor
790326B0901	50 Gallons Water Flooded into AMR Due to Depth Control Tank Manhole Cover Malfunction
790211B1001	Torpedo Tube Manhole Cover Opened, 100 Gallons of Sea Water Entered Torpedo Room
790122B1701	Drain Tunnel Above Pump Overflowed, Sea Water Enter and Short Out Motor Windings
780726B4201	O-Rings Failed and Causing Fresh Water Leak into Angle Solver Section
780408B1701	Plug in the Hydraulic System Blew Out, 20 Gal of Oil Gushed into ERU and onto DOA Components in Engine Room
780301B4001	A Small Leak from a Pipe Union, Caused Water Run onto the Motor, Motor Windings were Damaged
740810D0701	Sea Water Flooding, Motor Generator Grounded
730327D0401	Diesel Generator Flywheel Coupling Guard Plug Missing. Water was Leaking Out the Generator Air Cooler Casing

730112D1401	The Diesel Sea Water Overboard Backup Valve was Opened by Accident.
720403D0501	Sea Water Splash Resulted in Grounding of Vital Electrical Panels
710311D0801	Overfilled Fresh Water Tank and Flooded the Void Space
690903D0401	A Pin Hole in the Compensating Water Piping in Maneuvering Rod Caused Flooding in Maneuvering
	Flooding in Lower Level of Machinery Room was Due to Removal of a Hull Blanking Flange to Prevent Sea Water Leakage

APPENDIX A

III SHIP MISHAPS INVOLVING WATER AND POSSIBLE COLLATERAL DAMAGE

Navy Safety Center Data

REC'D ASEV

80011982001 C

MPD FRESH WATER TANK #5-98-1-W FILLED TO CAPACITY WHILE TAKING ON FRESH WATER FM PIER. SEVERAL BOLTS ON TANK COVER HAD BEEN DEVCONNED INTO PLACE. ONE OF DEVCONNED BOLTS CAME OUT ALLOWING A STREAM OF WATER TO SPRAY THROUGH BOLT HOLE. THE STREAM OF WATER HIT 400 HZ MG SET MOTOR CAUSING MOTOR TO SHORT. CLASS C FIRE STARTED, BUT WAS EXTINGUISHED WHEN POWER WAS SECURED. DIODES, IN MG SET MELTED, BUT FURTHER DAMAGE HAS NOT BEEN DETERMINED.

81042982601 B

MPD

TWO MEN ASSIGNED TO FIELD DAY NO. 1 ELEVATOR MACHINERY ROOM CAUSED ELECTRICAL EQUIPMENT TO SHORT DUE TO EXPOSURE TO SALT WATER. EXPOSURE WAS CAUSED BY SPRAYING SURROUNDING AREA WITH A 1 1/2 INCH FIRE HOSE TO AID IN PRE-WETTING AND TO RINSE SOAP OFF OF BULKHEADS. ELECTRICAL EQUIPMENT WAS EITHER DIRECTLY SPRAYED OR ALLOWED TO COME INTO CONTACT WITH WATER. CAUSING A CLASS "C" FIRE IN NO. 1 SWITCHBOARD. THE CIRCUIT BREAKER FOR NO. 1 ELEVATOR MACHINERY ROOM LOAD CENTER TRIPPED DUE TO EXCESSIVE CURRENT. INVESTIGATION SHOWED DAMAGE TO CIRCUIT BREAKER TO BE MELTING OF CONTACT SURFACES AND ARC SMOKE DAMAGE. BEFORE ELECTRICIANS WERE ABLE TO GET TO NO. 1 ELEVATOR LOAD CENTER, THE MBT WAS SHIFTED TO THE ALTERNATE SOURCE CAUSING ANOTHER CLASS "C" FIRE, THIS TIME ON NO. 3 SWITCHBOARD. NO. 1 ELEVATOR CIRCUIT BREAKER ON NO. 3 SWITCHBOARD HAS TRIPPED BUT EXCESSIVE CURRENT WELDED ITS CONTACTS CLOSED. MOST EXTENSIVE DAMAGE OCCURRED TO SWITCHBOARDS AND ALL ASSOCIATED FEEDER CABLES. INADEQUATE SUPERVISION MAIN CAUSAL FACTOR. BOTH MEN INVOLVED WERE NOTED TO BE OF QUESTIONAL COMPETENCY BOTH BY THEIR DIVISION OFFICER AND CHIEF PETTY OFFICER TO THE POINT THAT THE PERSONNEL EVALUATIONS MENTION THE NEED FOR CONSTANT SUPERVISION IN CONDUCTING JOB ASSIGNMENTS. EXCEPT FOR A BRIEF DESCRIPTION BY THE SUPERVISOR IN CHARGE, A THIRD CLASS PETTY OFFICER, OF TASK TO BE DONE AND BASIC TOOLSTO BE USED (BUCKET AND SPONGE/SOAP AND WATER) NO OTHER SUPERVISION WAS PROVIDED.

CID ASEV

012085701 C

MPD

CV IN NAVAL SHPYD-POST OVERHAUL. GAUGE & CALIBRATION SHOP WAS BEING MOVED TO A NEW LOCATION ABOVE #2 AMR. AN UNQUALIFIED, NON RATED MAN WAS WELDING BRACKETS FOR A LIGHTING FIXTURE WITH NO FIREWATCH & AN EXPIRED GAS FREE CHIT POSTED. A CONTAINER OF CLEAN RAGS WAS IGNITED IN LOFT AREA. APPR 0828 SMOKE SIGHTED & 3 MEN ATTEMPTED TO PUT OUT FIRE USING CO2. 0835 CLASS "A" FIRE REPTD TO OCC. 0836 FIRE REPTD OUT OF CONTROL & NUCLEUS FIRE PARTY CALLED AWAY. 0841 GEN QTRS CALLED AWAY. WATER APPLIED TO FIRE, 0900 FIRE UNDER CONTROL. 0905 FIRE OUT. 0926 SECURED.

2061080701 C

MPD

A SHIPYARD WORKER WAS CUTTING DOWN SOME PIPE WITH A TORCH. HOT SLAG CAME INTO CONTACT WITH COMBUSTABLE MATERIALS (PAPER BAGS) THAT WERE PILED IN A CORNER. THE RESULTING FIRE IGNITED WIRING ON THE BULKHEAD, BURNING THE INSULATION. THE FIRE WAS EXTINGUISHED WITH WATER BY THE IMPORT FIRE PARTY. THE NEED FOR GOOD HOUSEKEEPING AND USE OF PROPER PROCEDURES SHOULD ALWAYS BE EMPHASIZED. HAD THE WORKER POSTED A FIRE WATCH OR EVEN CLEARED THE ADJACENT AREA, THIS FIRE WOULD HAVE BEEN PREVENTED.

100180101 C

MPD

MAINTENANCE MAN WAS MANUFACTURING METAL BRACKETS WITH A CUTTING TORCH IN THE HT SHOP. INSTEAD OF CUTTING THE MATERIAL USING A METAL WORK BENCH AND VICE, MAN PROPPED MATERIAL AGAINST PARTITION BETWEEN HT SHOP AND TOOL ISSUE ROOM. SPARKS AND SLAG PASSED THROUGH A GAP IN THE PARTITION IGNITING FLAMMABLE MATERIAL IN THE TOOL ISSUE ROOM CAUSING A CLASS ALFA FIRE. WHEN THE FIRE WAS DISCOVERED, THE SHIP WENT TO GG AND THE DAMAGE CONTROL PARTY EXTINGUISHED THE FIRE WITH WATER RESULTING IN SALTWATER DAMAGE TO THE MOTOR GENERATOR SET INSTALLED IN THE SAME SPACE. THE MOTOR GENERATOR SET WAS NOT ENERGIZED AT THE TIME. FIRE FIGHTING WATER WAS THEN REMOVED FROM THE SPACE.

ECID

ASEV

31008B0101 B

MPD

WHILE CONDUCTING A BEECE DRILL IN ENGINEER ROOM, TWIN-AGENT STATION ENERGIZED FOR TRAINING. THIS WAS A PLANNED AND PRE-BRIEFED ITEM WHICH WOULD ALSO SATISFY A PMS REQUIREMENT. UPON LIGHT-OFF UPPER-LEVEL UNIT ACTIVATED AND SPRAYED WATER ON MAIN ELECTRICAL SWITCH BOARD. UPPER LEVEL WAS NOT INVOLVED IN BEECE, IT IS HOWEVER ACTIVATED BY SAME CONTROL PANEL. UPPER LEVEL NOZZLE WAS BAIL TYPE, WHICH HAD BEEN LEFT OPEN. INVESTIGATION REVEALED THAT EWO HAD INSPECTED THAT UNIT PREVIOUS DAY BUT BELIEVED THE BAIL WAS CLOSED AT TIME. NO MAINTENANCE OR PMS HAD BEEN PERFORMED ON THE UNIT SINCE THAT INSPECTION. PHYSICAL LOCATION OF UNIT PRESENTS TWO DESIGN ERRORS: ONE IS THAT THE UNIT POINTSAT SWITCH PANEL IN IT'S NORMAL SECURED POSITION AND THE SECOND IS THAT IT IS IN A HIGH USE AREA, WHERE IT COULD BE ACCIDENTLY KNOCKED/BUMPED OPN. WE HAVE REPLACED THE BAIL TYPE NOZZLE ON THIS STATION WITH A TRIGGER TYPE AND HAVE PLACED A QUICK REMOVEABLE COVER OVER THE ENTIRE UNIT. FIRE QUICKLY CONTROLLED BY REMOING POWER TO SWITCH BOARD THUS SAVING EXTENSIVE DAMAGE TO OPERATING SSTG.

ECID

ASEV

31017B5101 C

MPD

CLASS CHARLIE FIRE REPTD IN 185 KW SSDG. GEN QTRS CALLED AWAY. FIXED CO2 HOSE REEL SYS ENERGIZED BUT FLOODED SPACE WITH CO2 RATHER THAN DIRECTING CO2 THRU HORN OF GENERATOR. SPACE EVACUATED & PERMISSION REQUESTED & RECVD TO ENERGIZE HALON SYS. HALON ACTUATOR ENERGIZED BUT TIME DELAY DEVICE DID NOT ALLOW HALON TO DISCHARGE INTO FWD ENG RM. SPACE RE-ENTERED WIRH OBA'S FIRE WAS OUT. CAUSE OF FIRE WAS LOOSE CRIMPED TERMINAL CONNECTION ON STATER WINDING OF GEN WHICH CAUSED HI RESISTANCE CONNECTION. AFTER GQ CALLED AWAY SA HELPING PO DON AN OBA. PO INSERTED CANNISTER W/O REMOVING METAL CAP & SN BEGAN TURNING BALL ASSY HAND WHEEL. WHEN SN THOUGHT HE HAD PROPERLY SEALED CANNISTER, PO PULLED LANYARD & IT BROKE. SN THEN LEANED DN, PULLED COTTER PIN OUT WITH HIS FINGERS. METAL CAP HAD NOT BEEN REMOVED & ACTIVATED CANNISTER EXPLODED THRU BOTTOM & INTO HIS FACE. -PID ON FILE.

31217B0201 C

MPD CV DRY-DOCKED NAVAL SHPYD FOR REPAIR. SHPYD WORKER GRINDING IN FIRERM, & DID NOT HAVE F7W ASSIGNED. SPARKS IGNITED RESIDUAL FLUID WHICH HAD ACCUMULATED IN BILGE, MOST LIKELY FM LINES WHEN HYD OPER VLVS REMOVED FM SPACE, OR RESIDUAL LUBE OIL LEAK FM DISMANTLED FDB. SPACE HAD GAS FREE CHIT WHICH SPECIFIED HOTWORK AUTH ONLY INSIDE BOILER CASING ITSELF. IN VIEW OF INTENSIVE AMT OF WORK ON BOILER, WITH ATTENDANT FREE COMM TO BILGES, THERE IS LITTLE LIKELIHOOD THAT SPARKD COULD BE CONTAINED COLELY WITHIN BOILER CASING. PRE INVES INDIC MECHANIC MAY HAVE BEEN GRINDING OUTSIDE CASING WHEN FLUID IGNITED. SHIPS FORCE FIRE PARTY RESPONDED, FIRE BOUNDERIES SET. FIRE EXT AFFF/WATER. ASSIST PROVIDED BY SHPYD FIRE DEPT. QUICK RESPONSE EXT FIRE PREVENTED ANY SIGNIFICANT MATERIAL DAMAGE. THREE INJURIES-PID ON FILE.

ECID ASEV

4011984601 C

MPD ON OR ABOUT 0003 A FIRE ERUPTED IN #2 FIREROOM UNDER BURNER, ALLEY DECK PLATES. FIRE REPTD TO MAIN CONTROL AS CLASS "B" FIRE IN BILGES IN #2 FIREROOM. FIRE IMMED ATTACHED CO2. #2B BOILER SECURED BY WATCH TEAM. FIRE FOUGHT WITH PKP BTLs & TWIN AGENT STA FM UPPER & LOWER LEVEL ENGRM. GQ SET THRU OUT SHIP 0011. FIRE PREVIOUSLY REPTD TO MAIN CONTROL AS CLASS B BUT LATER REPTD AS CLASS C FIRE. FIRE OUT 0013. BILGES FILLED WITH AFFF FOAM AS SAFETY PRECAUTION & REFLASH WATCH SET. GQ SECURED 0043. CABLE RUNS THRU BILGES IN FIRERM WITH NO PROTECTIVE COVERING. WITHOUT RUNNING REPLACEMENT CABLE IN CONDUIT, CIRCUMSTANCES SUCH AS THOSE EXISTING AT TIME OF FIRE CAN BE EXPECTED TO RECUR. (LOCALLY PREPARED REPORT)

0531B0301 C

MPD AT 3117072 EXHAUST BOOT TO NR 1 GENERATOR (THE ONLY GENERATOR ON THE LINE) WAS FOUND TO BE SMOLDERING BY THE GENERATOR WATCH. ALMOST SIMULTANEOUSLY, THE SMOKE ALARM FOR MER 1 SOUNDED ON THE DC CONSOLE IN CCS. AT 1708Z DUTY INPORT FIRE PARTY CALLED AWAY AND EXTERNAL COOLING OF EXHAUST BOOT BEGAN BY ON STATION PERS WITH CO2 AND WATER. AT 1710Z NR 1 GENERATOR WAS SECURED AND NR 3 GENERATOR WAS BROUGHT ON LINE SUPPLYING POWER TO SHIP. POSITIVE VENTILATION WAS SET IN THE SPACE AND SMOKE CLEARED. BY 1720Z THE EXHAUST BOOT WAS COOLED AND SMOKE GENERATED BY THE SMOLDERING HAD CEASED. EXTENT OF DAMAGE: SMOLDERING OF EXHAUST BOOT CASUED RUBBER ON BOOT TO BURN THROUGH FROM THE 4 O'CLOCK POSITION TO THE 8 O'CLOCK POSITION. INTERIOR EXHAUST BOOT INSUL WAS ALSO DAMAGED. MISHAP CAUSED BY SMOLDERING OF EXH BOOT. THIS BELIEVED TO HAVE BEEN GENERATED BY HOT EXH GASES & POSS ACCUM OF UNBURNED FUEL IN EXH BOOT, ALTHOUGH EXH BOOT IS PROVIDED WITH DRAIN LINE. CASUALTY RAISES QUESTION OF EFFECTIVENESS OF DRAIN LINE IN REDUCING FUEL ACCUM IN GEN EXH BOOT.

REC'D ASEV

8407280301 C

MPD CV EISRA. HOT SLAG FROM WELDING OPERATION CAUSED CLASS "A" FIRE IN BUNDLES OF RAGS AND PERSONAL GEAR WHICH HAD BEEN INADVERTENTLY LEFT IN THE MACHINE SHOP. FIRE WATCH HAD BEEN POSTED BUT FAILED TO NOTE PRESENCE OF FLAMMABLE MATERIALS IN A REMOTE CORNER OF THE COMPARTMENT BELOW THE WELDING WORK. THE FIRE WATCH REMAINED AT THE SCENE OF THE WELDING FOR ONE HOUR AFTER THE JOB WAS COMPLETED. THE FIRE STARTED FIFTEEN MINUTES LATER FROM A SMOLDERING EMBER. THE FIRE WAS EXTINGUISHED WITH SALT WATER. FIRE FIGHTING EFFORTS CAUSED MINOR FLOODING IN ADJACENT COMPARTMENTS. DEWATERING WAS ACCOMPLISHED WITH A SANDPIPER PUMP, BUCKETS AND SWABS.

84081483101 C

MPD FF ROH. SHIPS DIESEL GEN WIRED BY SHPYD TO RESISTOR LOAD BANK IN ORDER TO CONDUCT LOAD TEST OF DIESEL. LOAD CENTER CONNECTED INTO MAIN DIESEL CKT BKR OF AFT ELEC SWITCHBD #2S. LOAD TEST, 8 HRS IN LENGTH WITH DIESEL OPERATING NEAR MAX DESIGN LOAD 1200 AMPS AT 750KW CONDUCTED & SUBQ SECURED. DURING COURSE OF TEST LARGE AMT OF HEAT GENERATED IN CABLE CONNECTING WHICH APPARENTLY CAUSED INSUL ON LOAD BANK CABLE PIGTAILS TO OVERHEAT & BREAKDN. THIS THERMAL BREAKDOWN & POSS ARCING CAUSED BY SHORTING OF PIGTAILS TO BUSBARS APPARENTLY SOURCE OF FIRE. AFTER IGNITION FIRE SPREAD TO ADJACENT BULKHD AT FR 147 & REACHED SCUTTLE OVERHD OF SWITCHBD WHEN FIRE STOPPED WITH APPLICATION LOW VELOCITY FOG. SUBQ TO INITIAL FIRE THERE WERE 3 SMALL REFLEASHES WHICH WERE PUT OUT BY CO2. HIGH TEMP IN BACK OF SWBDCAUSING DAMAGE TO INSUL PRIOR START OF FIRE.

84082780301 C

MPD AT 272345Z AUG EXHAUST BOOT TO NR 1 GENERATOR (THE ONLY GENERATOR ON THE LINE) WAS FOUND SMOKING BY GENERATOR WATCH WHEN HE WENT INTO SPACE TO INVESTIGATE A FIRE ALARM INDICATION ON DC CONSOLE FOR MER#1. AT 2346Z DUTY INPORT FIRE PARTY CALLED AWAY AND EXTERNAL COOLING OF EXHAUST BOOT BEGUN USING FRESH WATER. AT 2347Z NR 1 GTG PARALLELED WITH SHORE POWER, GB1SG OPENED AND NR 1 GTG SECURED IN CCS. FIRE OUT AND EXHAUST BOOT COOLED DOWN BY 280010Z. SMOKE CLEARED USING INSTALLED VENTILATION. NO PERSONNEL INJURIES OCCURRED AND NO OTHER EQUIPMENT DAMAGED. MISHAP CAUSED BYHOT GASES FROM GTG COMING IN DIRECT CONTACT WITH EXHAUST FLEX CONNECTION. EXHAUST ELBOW APPEARS TO HAVE SETTLED LEAVING A GAP BETWEEN EXHAUST DPFUSER AND WIRE-BRAIDED INSULATION COIL OF EXHAUST BOOT.

REC'D ASEV

8409080201 A

MPD

CG U/W ISE. FIRE IN UPTAKE TRUNK #2. GQ CALLED ALMOST IMMEDIATELY AFTER SEA FIRE PARTY HAD BEEN CALLED AWAY. DAMAGE TO #2 SSGTG INTAKE, BULKHEAD AFT WARDROOM STBD SIDE, BULKHEAD FWD STA SIDE LOWER HELIX HGR, 40 MM MAGAZINE DAMAGE, INTAKE RM DAMAGE 01 TO 04 LEVEL TOP HAT AREA, SPACE DIRECTLY AFT OF INTAKE RM SKIN OF SHIP 01-04 LEVEL STBD SIDE, STRUCTURAL DAMAGE ALL AREAS, WIRING, STACK. CAUSE UNSAFE CONDITION-STORAGE OF UNAUTHORIZED MATERIAL IN SPACE, UNDER INVESTIGATION. FIGHTING FIRE SOLID STREAM S/W FM ALL PURPOSE NOZ STRUCK BURNED THRU ELEC CABLE & LIMITED ELEC SHOCK TO MR3-PID ON FILE. (LOCALLY PREPARED REPORT CLAIMS 12 INJURIES FM SMOKE INHALATION, MINOR BURNS-NAMES UNKNOWN AT THIS TIME) LOCATION 30-15N/077-51W

8412140201 A

MPD

FF DRYDOCKED CIVILIAN SHIPYD. FIRE BEGAN IN AUX II WHILE SUBCONTRACTOR FOR OVERHAUL WAS PREPARING BILGE AREA FOR PAINTING. SUBCONTRACTOR WORKERS HAD PILED RAGS SOAKED WITH CLEANING SOLVENT (TYPE UNKNOWN) IN FRONT OF NR1 DIESEL. SOMEONE PLACED A VACUUM CLEANER (APPARENTLY WITH FAULTY WIRING) IN THE VICINITY OF THE PILE OF RAGS. THE RAGS IGNITED, SUBCONTRACTOR PERSONNEL WORKING IN AUX II DID NOT KNOW HOW TO OPERATE THE CO2 HOSE REEL IN THE SPACE AND EVACUATE THE SPACE. ONE MEMBER OF THE CONTRACTOR'S SAFETY TEAM ATTEMPTED TO EXTEND FIRE WITH A PORTABLE WATER EXTINGUISHER. THIS PROVED INEFFECTIVE AND HE TO EVACUATED SPACE. FIRE QUICKLY SPREAD TO THE OVERHEAD, IGNITING FUMES FROM SOLVENT AND INSULATING. SPACE WAS NOT PROPERLY VENTILATED BY CONTRACTOR. THIS IS WHERE THE MAJORITY OF DAMAGE WAS SUSTAINED. SHIPS FORCE FIRE FIGHTING PARTY RESPONDED AND WITH THE AID OF THE CITY FIRE DEPARTMENT, FIRE BROUGHT UNDER CONTROL AND EXT IN APPROX 55 MINUTES. FIRE DAMAGE CONTAINED TO AUX II WITH SOME SMOKE AND WATER DAMAGE TO THE JP5 PUMP ROOM, COMPRESSOR ROOM AND NR2 SWITCHBOARD ROOM. OVERHEAD, WIRERUNS, DUCTING AND PIPE INSULATION IN AUX II SUFFERED GREATEST DAMAGE, SHIPS FORCE UNABLE TO ASCERTAIN ANY MAJOR DAMAGE TO DIESELS AT THIS TIME. COST OF TOTAL DAMAGE WILL BE PROVIDED BY SUPSHIPS AS SOON AS IT IS DETERMINED. INFORMAL JAG INVESTIGATION. PIPE INSULATION IN AUX II SUFFERED GREATEST DAMAGE. JAG INVEST ON FILE.

5051381001 C

MPD

CLASS CHARLIE FIRE REPORTED IN NR SEVEN ELEVATOR MACHINERY ROOM. PRELIMINARY INVESTIGATION INDICATES ELEV MOTOR OVERHEATED WHILE IN USE EMITTING SMOKE AND FLAMES FROM VENT PORTS. CO2 USED TO EXTINGUISH FIRE BUT EXCESSIVE HEAT IN ROTOR AND WINDINGS CAUSED SEVERAL REFLASHES. FRESH WATER USED TO COOL INTERNAL PARTS TO AMBIENT TEMPERATURE. FIRE PUT OUT IN APPROX TEN MINUTES. EXPENDED 19 OBA CANNISTERS AND 7 FIFTEEN POUND CO2 BOTTLES. POSSIBLE CONTRIBUTING FACTORS FOR MOTOR FAILURE: PARTED HOIST CABLE-OCT 83, PARTED HOIST CABLE-OCT 84. CONTRACTOR REPAIRED THREE (3) TIMES DUE TO STICKING HIGH SPEED CONTACTS-1983, 1984, 1985. MAIN SWITCHBOARD CIRCUIT BREAKER BURNED CONTACTS ALLOWING ELEVATOR OPERATE WITHOUT ALL PHASES-5 MAY 85. MOTOR'S LOW SPEED WINDINGS RATED AT 77 AMPS BUT CONTROLLER'S OVERLOAD PROTECTIONS RATED AT 91.7 AMPS.

ECID

ASEV

50531B3901 C

MPD

SMOKE AND GLOWING EMBERS INDICATING A "CLASS A" FIRE WAS DISCOVERED BY THE S/S WATCH. REPORT WAS MADE TO DAMAGE CONTROL CENTRAL AND FIRE PARTY WAS CALLED AWAY ON IMC. INITIAL ATTEMPTS WITH PORTABLE 15 LB CO2 FAILED DUE TO REFLASH. CLASS A FIRE WAS CONTAINED AND EXTINGUISHED BY FIRE PARTY USING HIGH VELOCITY WATER FOG. NORMAL COMPARTMENT DESMOKING AND DEWATERING PROCEDURES WERE FOLLOWED. NO INJURIES WERE REPORTED. RESULTS OF INVESTIGATION INDICATED FIRE WAS INTENTIONALLY SET. SUSPECTED ARSONIST CANNOT BE IDENTIFIED FROM AVAILABLE INFORMATION. (LOCALLY PREPARED REPORT)

50715B0701 C

MPD

CV IN NAVAL SHPYD ROH, CLASS "A" FIRE, AT APPROX Q905, AN UNDETERMINED CLASS OF FIRE WAS CALLED AWAY FOR PASSAGEWAY 02-181-2-L OUTSIDE CREW'S BARBER SHOP. UPON ARRIVAL AT SCENE AN ATTEMPT MADE TO EXTINGUISH WHAT APPEARED TO BE A MINOR CLASS "A" FIRE ON DECK. WHEN WATER HIT BURNING MATERIAL (SUSPECTED TILE OR INSULATION) HEAVY SMOKE RESULTED AND TEAM WAS FORCED OUT TO WAIT FOR OBA'S. AT 0915 HOSE TEAMS WERE MANNED AND READY AND FIRE WAS ATTACKED. INVESTIGATORS FOUND HOT AREAS/FIRE IN THE VENT SYSTEM OF COMPARTMENT 01-177-2-Q, 02-172-4-L AND 02-179-2-Q. FIRE FIGHTING EFFORTS WERE SEVERELY HAMPERED BY DENSE SMOKE AND FOUR INCH APPLICATOR BEING CLOGGED WITH PAINT CHIPS FROM REHAB OF ADJOINING SPACE. DESMOKING HOSES WERE BROUGHT IN FROM FLIGHT DECK AND HANGAR BAY. FIRE EXTINGUISHED Q935. SPACES DEWATERED UTILIZING EJECTORS, DESMOKING AND DEWATERING COMPLETE 1245. POST FIRE INVESTIGATION REVEALED FIRE STARTED IN VENT FILTER CLEANING ROOM (COMPARTMENT 01-177-2-Q) BY A SHIPYARD EMPLOYEE (SHOP 17) GRINDING ON VENT APPROX SIX INCHES ABOVE GAYLOR HOOD. FIRE PROPAGATED THROUGH EXHAUST VENT SYSTEM TO OTHER SPACES. SYSTEM WAS NOT TAPPED OUT AND NO HOT WORK CERTIFICATION HAD BEEN OBTAINED PRIOR TO GRINDING.

0123B0801 C

MPD

VENT LINE FOR NR TWO AIR CONDITIONING UNIT RUPTURED, SPRAYING NR TWO AND THREE SWITCHBOARDS WITH SEA WATER CAUSING SHORTS AND CLASS CHARLIE FIRE. SEA WATER SYSTEM WAS SECURED, SWITCHBOARDS WERE ELECTRICALLY ISOLATED AND FIRE EXTINGUISHED WITHIN FOUR MINUTES. VENT LINE WAS FOUND TO HAVE INTERNAL CORROSION AND SUBSEQUENTLY WEAKENED.

REC'D ASEV

86022082201 C

MPD FFG DRY-DOCKED ROH IN CIVILIAN SHPYD. CIV WORKER WELDING ON UPPER LEVEL VESTIBULE, MAIN ENGINE ROOM STARBOARD SIDE USED NON FIRE RETARDANT CANVAS TO PROTECT CABLEWAYS ON LOWER LEVEL OVERHEAD OF MAIN ENGINE ROOM. CANVAS CAUGHT ON FIRE, INITIAL CLASS ALFA FIRE FIGHTING ATTEMPTS USED CO2; DUE TO REFLASH USED LOW VELOCITY FOG TO PUT FIRE OUT. SHIPYARD CONDUCTING TRAINING ON FIREWATCHES AS TO PROPER MATERIALS TO BE USED FOR PROTECTION WHILE CONDUCTING HOTWORK.

REC'D ASEV

86022184801 C

MPD CV DRYDOCKED IN CIVILIAN SHPYD. FIRE DISCOVERED BURNING IN NUMBER THREE SHAFT ALLEY. FIRE WAS EXTINGUISHED WITH WATER IN 15 MINUTES. SPACE WAS USED FOR STORING LAGGING MATERIALS. SUSPECTED CAUSE OF FIRE WAS FROM DISCARDED CIGARETTE.

86030385301 C

MPD LOW CAPACITY FOG FOAM SYSTEM ENERGIZED IN AUXILIARY MACHINERY ROOM NR1 AFTER TAU UNIT ACTIVATED ON LOWER LEVEL. THIS ACTIVATION SUBSEQUENTLY PROVIDED AFF TO ALL AU UNITS IN SPACE AND REENTRY HOSES. PRESSURIZED HOSE IN SPACE UPPER LEVEL (STBD SIDE) RUPTURED AND SPRAYED FOAM ON LOAD CENTER 51. ARCING IN LOAD CENTER OCCURRED AND RESULTED IN FRONT PANEL EXPLOSION AND CLASS C FIRE. SHIP LOST POWER, FIRE DEPARTMENT CALLED TO SCENE, CLASS "C" FIRE EXTINGUISHED, AND LOW CAPACITY FOG FOAM SYSTEM SECURED. EMERGENCY DIESEL GENERATOR STARTED AND PARTIAL POWER RESTORED. AFF HOSE REPLACED; LOAD CENTER REPAIRED. CAUSE UNDET JAG INVES.

6071682701 C

MPD CHAIN OF EVENTS LEADING UP TO, THROUGH, AND SUBSEQUENT TO MISHAP: AT APPROX 1200 WHILE OUTBOUND VICINITY RIVER BRIDGES, SHIP EXPERIENCED PHASE GROUND ON MAIN SWITCHBOARD FOLLOWED BY OVERHEATING LPAC DEHYDRATOR IN FORWARD FIREROOM, CLASS CHARLIE FIRE IN VENT FAN 1-47-1 AND CLASS CHARLIE FIRE IN DEGAUSSING JUNCTION BOX IN FORWARD ENGINE ROOM. AT 1213, INVESTIGATION DISCOVERED APPROXIMATELY 4 FEET OF SALT WATER IN FORWARD AC ROOM 5-43-0-E. INVESTIGATION DETERMINE 4 INCH INLET SALT WATER EXPANSION JOINT SUPPLYING NUMBER ONE AC RUPTURED. STORE ROOMS BELOW REMAINED WATER TIGHT. PETTY OFFICER AS PART OF EMERGENCY INVESTIGATION REPAIR TEAM OVEREXERTED HIMSELF IN GOING UP AND DOWN LADDERS BETWEEN SPACES TO EXCEUTE CASUALTIES, PID ON FILE.

MPD

AT 070243R NOV 87, ROVING PATROL DISCOVERED SMALL ALFA FIRE IN COMPT 1-90-0-E. EMERG INPORT FIRE PARTY CALLED AWAY AT 0245. FIRE IN COMPT 1-90-0-E EXT APPROX 0249 WITH CO2 EXTINGUISHER. INVESTIGATORS REPORTED SECOND ALFA FIRE IN COMPT 5-79-0-E, FIREROOM, PORISIDE, UPPER LEVEL. AFTER REPORTING FIRE TO REPAIR FIVE, INVESTIGATORS FOUGHT FIRE WITH SALT WATER, USING 1 1/2" HOSE WITH 4' APPLICATOR. A DRILL CONDUCTED 3 MONTHS PRIOR TO THE ACTUAL FIRE HAD SHOWN THAT TAFES COULD NOT BE EFFECTIVELY USED ON A FIRE IN THIS PARTICULAR LOCATION. THE REMAINED OF THE FIRE PARTY ACTIVATED TAFES AND PUT FOAM INTO THE BILGE BENEATH THE FIRE. FIRE WAS EXTINGUISHED AT 0308. A REFLASH OCCURRED AT 0310 AND WAS EXTINGUISHED IMMEDIATELY BY REFLASH WATCH. SPACE WAS DESMOKED USING INSTALLED VENTILATION AND AIR TURBINE BLOWERS. GAS FREE PETTY OFFICER TESTED SPACE AND CERTIFIED GAS FREE. NIS INVESTIGATED SCENE, DAMAGE TO FDB, PIPING, POWER CABLING, VENT DUCTING, ETC-POSS ARSON.

880304B0501 C

MPD

THE UNION OF THE RECIRC LINE AND THE PUMP DISCHARGE LINE. THE PUMP WAS SECURED FOR REPAIRS AND THE DISCHARGE LINE WAS ISOLATED. AN HTFN WAS ASSIGNED TO MAKE THE REPAIR BY BRAZING. HE WAS ISSUED A HOT WORK CHIT AND ASSIGNED A FIRE WATCH. HE AND THE FIRE WATCH (ENFA) WERE IN THE PROCESS OF LOOSENING THE PIPE UNION ON THE RECIRC LINE TO BLEED RESIDUAL WATER FROM THE LINE AND TO PROVIDE A VENT FOR THE PIPE WHILE BRAZING. WHEN THE UNION WAS LOOSENED, THE SUSPENDED PORTION OF THE LINE SUDDENLY MOVED TO ONE SIDE AND THE RESIDUAL PRESSURE FROM THE PIPE DISCHARGED INTO THE TRANSFORMER OF NR ONE SSDG. THE SALT WATER IN THE TRANSFORMER CAUSED A SHORT BETWEEN TWO OF THREE TRANSFORMER ELEMENTS. THIS LED TO A CLASS CHARLIE FIRE IN THE TRANSFORMER CABINET AND SUBSEQUENT ALFA FIRE AS OTHER MATERIAL IN THE CABINET BURNED. THE FIRE WAS EXTINGUISHED BY ELECTRICAL ISOLATION AND CARBON DIOXIDE. THE SPACE WAS DE-SMOKED USING INSTALLED VENTILATION. THE SALT WATER PUMP IS LOCATED APPROXIMATELY SIX (6) FEET FROM THE GENERATOR. THE DAMAGE WAS LIMITED TO THE AFFECTED GENERATOR. SYSTEM ISOLATION AND DEPRESSURIZATION MUST BE THOROUGHLY CHECKED BY COMPETENT PERSONNEL PRIOR TO THE COMMENCEMENT WORK. THE GENERATOR IN THE VICINITY COULD HAVE BEEN SECURED AND PERSONNEL SHOULD HAVE BEEN EQUIPPED WITH SPRAY SHIELDS. THERE WAS NO GAUGE IN THIS SECTION OF THE LINE TO INDICATE PRESSURE AND IT WAS BELIEVED THAT THE SYSTEM WAS DEPRESSURIZED.

REC'D ASEV

881106B1701 C

MPD SHIP IN CIVILIAN SHPYD ROH. WATCH SMELLED SMOKE & SENT ROVING SECURITY TO INVES. FOUND WATER SPRAYING INTO OVERHEAD OF AMR 2 AND SMOKE ISSUING FROM IT. UPON INVES FOUND WATER SPRAYING ON NR 2 AND NR 3 SWITCHBOARD. NR 1 HIGH PRESS AIR COMPRESSOR (HPAC) FOUND TO BE SOURCE OF WATER AND IT WAS SECURED AND WATER STOPPED SPRAYING. SHORE POWER SECURED AND CLASS "C" FIRE IN SB SECTION OF NR 3 SWITCHBOARD AND POWER PANEL EXT WITH CO2. DAMAGE IN SB SECTION NR 3 SWITCHBOARD, CONT CABLES AND POWER PANEL. CAUSE OF DAMAGE AND FIRE FOUND TO BE PLUG ON SALTWATER FLOW INDICATOR HAD EXCESSIVE CORROSION AND FAILED. SPECIFIC CAUSE WAS FAILURE TO DETECT CORROSION OF FLOW INDICATOR PLUG BY CONTRACTOR PERS.-HPAC HAD JUST UNDERGONE EXTENSIVE OVERHAULING THAT SHOULD HAVE FOUND AND COLLECTED CORRODED PLUG. UPON INVES IT WAS FOUND SOME FLOW INDICATORS DO NOT HAVE PLUGS. RECOMMEND THAT ALL THIS CLASS SHIPS INSPECT HPAC'S AND REPLACE CORRODED PLUGS AS REQUIRED. REPORT FROM JAG INVES.

REC'D ASEV

390513B1201 A

MPD 1845 V-4 REC'D CALL FM AC MACHRM STATING FIRE BUT COULD NOT TELL WHERE. FIREBALL & HEAVY SMOKE ROSE UP TO 2ND DK.-PUMPRM FIRE ANNOUNCED. POSS OPER TO PROVIDE COOL WTR DURING STANDBY CYCLE #1 CENTRIFUGAL PURIFIER/POSS MALF & OV'HEAT #1 PURIFIER. #2 JP-5 PUMPRM CONTAINS #1 & 2 PURIFIERS. NAVSEA MAN STIPULATES THAT MORE THAN ONE START/RESTART EVERY 1-1/2 HR MAY DAMAGE CENTRIFUGAL PURIFIER. IF IT IS TO BE OPERATED AGAIN WITHIN 1 1/2 HR AFTER COMPLETE RUN, IT SHOULD NOT BE SHUT DN. SLOW CONTINUOUS WTR STREAM SHOULD BE INDUCED INTO BOWL USING PRIMING VLV UNTIL OPER IS READY TO PURIFIER FUEL AGAIN. UNDER NORM CONDIT FUEL ENTERING BOWL TO BE PURIFIED ALSO PROVIDES COOLING FOR PURIFIER OPS. APPROX 40 MIN PRIOR TO MISHAP, CREW TURNOVER OCCURRED DURING WHICH TIME 1 & 2 PURIFIERS NORMALLY PLACED STANDBY CONFIGURATION W/O FUEL BEING INJECTED FOR PURIFICATION. POST MISHAP SHOWED VLV CLOSED. RECORDS INDIC DURING ATTEMPTS TO ISOLATE JP-5 SYS FOL CASUALTY FOUND VLV OPEN & CLOSED IT. PURIFIER REVL'D EVIDENCE DISCOLORATION & DISFIGUREMENT IN SOME COMPONENTS DUE HI HEAT CONTAINED WITHIN BOWL ASSY. POSS OPER RE-INTRODUCED FUEL INTO BOWL, FUEL VAPORIZED, EXPANDED, IGNITED, & BLEW OFF FLEX HOSE DISCHARGE AT 90 DEG BRAZED JOINT; OR IT MAY HAVE OVERHEATED DUE INTERNAL MALF(EG., DEFECTIVE BRGS) UNRELATED TO SOP. FIRE RAPIDLY SPREAD UNTIL ENTIRE COMPT FLASHED, RESULT-EXPLOSION LIKE SHOCK WAVES EXPR THRU OUT FWD PART OF SHIP. CAUSE OF FATALITIES WAS ASPHYXIATION & FIRE DAMAGE, SMOKE & FLOODING FROM AFFP, JP-5 & SALT/FRESHWATER. (LENGTHY REPORT ON FILE) PID ON FILE.

REC'D ASEV

89061681501 C

MPD CLASS C FIRE IN PROPULSION CONTROL CUBICLE. NO INJURIES. PROPULSION LOST, REQUIRING TOW BACK TO BASE. DAMAGE TO SEVERAL TRANSFORMERS AND PROPULSION BUS WORK.

19101182701 C

MPD SHIP WAS IN PROCESS OF CHECKING PLUGS IN SEAWATER SYSTEMS AS PER NAVAL SAFETY CENTER ADVISORY 20-89. INSPECTION REPORT WAS DUE BY 3 NOV 89. ON 11 OCT 89 A FERROUS PLUG IN THE BOTTOM BELL HOUSING TO THE NUMBER 1 DISTILLING COOLER BLEW OUT SPRAYING WATER INTO THE 1S SWITCHBOARD. THIS RESULTED IN A CLASS C FIRE WHICH CAUSED DAMAGE TO THE UPPER PORTION OF THE 1S SWITCHBOARD. MAJOR DAMAGE WAS THE COPPER BUS BARS THAT MELTED OFF THE LINE SIDE OF THE BREAKERS. A COMPLETE CHECK OF ALL SEAWATER PIPING SYSTEMS REVEALS ALL OTHER PLUGS ARE PROPER TYPE.

39110780101 C

MPD DURING ASW OPERATIONS A MINOR FIRE ON 05 LEVEL OF HER MACK (FF CLASS FRIGATE) NO INJ, BUT DAMAGE CAUSED TO ELECTRONIC EQPT/CABLES LOCATED IN SPACE, AT 1900 EWSN REPORTED SMOKE ABOVE & AROUND EW PASSAGEWAY LOCATED SLIGHTLY FWD & BELOW MACK. SHIP'S FLYING SQUAD WAS PROMPTLY CALLED AWAY & A SLOW PROCESS STARTED IN SEARCH TO FIND CAUSE OF SMOKE. BY 1915, SMOKE SOURCE WAS FOUND TO BE 05 LEVEL OF MACK WHICH WAS COMPLETELY FILLED WITH HVY SMOKE. FLYING SQUAD EQUIPPED WITH OBA'S, LANTERNS, HELMETS, & TWO FIRE HOSES BEGAN TO FIGHT MOUND OF PERSONAL GOODS WHICH WERE SLOWLY BURNING IN HEAT OF ECM3, RECOGNIZING FIRE FIGHTING PERIOD WAS GOING TO BE PROLONGED (ALTHO NOT AGAINST ANY INTENSE FLAMES, FF CALLED AWAY MOST OF REPAIR LOCKER PERS TO RELIEVE HT'S OF FLYING SQUAD. PERS WHOSE SPACES AFFECTED EITHER BY FIRE OR WATER USED AGAINST FIRE, PLAYED ACTIVE ROLE IN EXTINGUISHING/OVERHAULING FIRE. ACTIVE OBA & FIRE HOSE USE LASTED 3-1/2 HRS. SPACE WAS THEN CHECKED FOR OXYGEN, EXPLOSIVE GASES & TOXIC GASES W/ POSITIVE RESULT ALLOWING SECURING OF OBA'S. FIRE PARTY RESTOWED EQPT AT 2330 & OPS DEPT PERS COMMENCED CLEANUP LASTING THRU NIGHT. CAUSE OF FIRE DETERMINED TO BE PERSONAL GOODS IMPROP STOWED ON TOP OF SMOKE PIPE WHICH BURST INTO CLASS "A" FIRE. DUE TO LOCATION OF FIRE, THERE WERE INADEQ COMMS USED (SOUND-POWERED PHONES). CLEAR WARNING OF MACK ON KNOX-CLASS FF'S FOR STORAGE PURPOSES. NEED FOR DAILY INSPECTIONS OF SHIP'S SPACES, ESPECIALLY THOSE W/ HI TEMPERATURES OR OTHER FIRE-CAUSING PROPERTIES, TO ENSURE CARELESS ACTS AREN'T GOING BY UNNOTICED. MUCH OF MATERIAL THAT MELTED & SMOKED WAS SYNTHETIC. FURTHER EVIDENCE OF DANGERS THAT MATERIAL IN ENGRG AREAS WAS PROVEN. CONCEPT OF A FLYING SQUAD SUPPORTED BY A LARGE BACK-UP FORCE WAS AMPLY PROVEN.

ECID ASEV

0042084001 C

MPD CBR DRILL REQUIRED LIGHTING OF COUNTERMEASURE WASHDOWN SYST, PIPING FOR SYST
LEAKED SEA WATER ONTO 400HZ 450/12V C PHASE TRANSFORMER GROUNDING IT OUT. THIS
CREATED CLASS "C" FIRE IN TRANSFORMER. IN ADDITION "C" PHASE GROUND CAUSED
GROUND IN NR.1 400HZ CONVERTER. THIS ALSO RESULTED IN A CLASS "C" FIRE. BOTH
FIRES QUICKLY PUT OUT, BUT BOTH TRANSFORMERS AND MOST OF CONVERTER DESTROYED BY
FIRE. BOTH FIRES EXTINGUISHED BY ISOLATING POWER AND USING PORTABLE CO2. NO PERS
CASUALTIES.

ECID ASEV

0101180101 C

MPD CLASS ALPHA FIRE DISCOVERED BY MAINT MAN CONDUCTING UNRELATED WORK NEARBY.
GENERATOR IMMED SECURED & MOTORED. FIRE OUT 2 MINS AFTER REPTD. CO2 & WATER USED
TO EXTINGUISH SMOLDERING INSUL'N & OVERHAUL.

APPENDIX B
INADVERTANT OPERATION OF HALON SYSTEMS
NAVY SAFETY CENTER DATA, 1980

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----		NON GOVERNMENT PROPERTY DAMAGE LOSSES -----		NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TOTAL	TYPE PROPERTY	INJ DEATHS
VALUE: \$0	\$0	\$0	\$0		0
LOSS: \$0	\$0	\$0	\$0		0
I. D. 86020190400					
1759-FIRE ALARM BOX CAME IN RESPONDING TO ZONE 11, COMPUTER ROOM ALDG 8. HALON SYSTEM HAD DISCHARGED. INSPECTED COMPUTER ROOM NO FIRE. UPON INSPECTION OF HALON SYSTEM CONTROLS THE ABORT SWITCH HAD BEEN ACTIVATED AND THE OVERRIDE SWITCH HAD BEEN ACTIVATED AT THE SAME TIME CAUSING THE HALON SYSTEM TO DISCHARGE, THIS IS AN ARMY INSTALLATION. COST UNKNOWN.					

APPENDIX
INADVERTANT OPERATION OF HALON SYSTEMS
NAVY SAFETY CENTER DATA, 1983

SHORE FIRE MANAGEMENT REPORT

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12 APR 91

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: DOD FXD EXT SYS W/ DMAGE

TIME FRAME: JAN 83 THRU DEC 83

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 83052390100 (CONTINUED) ***

HALON 1301 FIRE EXTINGUISHING SYSTEM DISCHARGED REQUIRING SUBSEQUENT RECHARGING \$13,945 ACTUAL COST TO RECHARGE SYSTEM. PROPER, PRUDENT SAFEGUARDS NOT TAKEN WHEN UTILIZING CUTTING TORCHES IN A WORK SPACE IN CLOSE PROXIMITY TO AN ELABORATE AND SENSITIVE AUTOMATIC FIRE DETECTION/EXTINGUISHING SYSTEM. WASTE TO COMPLETE TASK. COMPUTER CENTER UNDERGOING EXTENSIVE ENVIRONMENTAL UPGRADES. ONE IMPROVEMENT A HALON 1301 FIRE EXTINGUISHING SYSTEM. CUTTING TORCHES WERE USED TO DISMANTLE LARGE AMOUNT OF MECHANICAL EQUIPMENT. SMOKE FROM CUTTING TORCH ESCAPED FROM ROOM ENTERED COMPUTER ROOM VIA OPEN UNUSED DUCTING & UNDER RAISED FLOOR. AN AUTOMATIC ALARM CONDITION INITIATED, RESULTING IN HALON SYSTEM DISCHARGE. PERSONNEL STILL INSIDE COMPUTER ROOM WHEN EXTINGUISHING AGENT RELEASED ALL EVACUATED. PERSONNEL THAT COMPLAINED OF SIDE EFFECTS SEEN AT DISPENSARY AND WHERE GIVEN REST OF DAY OFF. ALL EXCEPT ONE RETURNED TO WORK FOLLOWING DAY. NO APPARENT ILL EFFECTS. ONE EMPLOYEE CONTINUES TO COMPLAIN OF SIDE EFFECTS. GSA RESPONSIBLE FOR ON-SITE SUPERVISION OF CONTRACT EMPLOYEE TRAINING OF COMPUTER PERSONNEL REGARDING HALON SYSTEM. MOST WERE NOT FAMILIAR WITH SYSTEM. MANY INDIVIDUALS REMAINED IN CENTER EVEN WITH THE ALARMS ACTIVATED. DISCHARGE COULD HAVE BEEN PREVENTED. TWO DESIGN DEFICIENCIES CONTRIBUTED TO THE MISHAP. LOCATION OF ALARM HORNS INSUFFICIENT TO PROVIDE ADEQUATE WARNING THROUGHOUT COMPUTER CENTER. MAIN ENTRANCE DOOR TO COMPUTER CENTER CONTRIBUTED TO EVACUATION PROBLEMS. THIS DOOR OPENS INWARD.

HALON No Collateral Damage

APPENDIX
INADVERTANT OPERATION OF HALON SYSTEMS
NAVY SAFETY CENTER DATA, 1984

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SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: DOD FXD EXT SYS W/ DMAGE

TIME FRAME: JAN 84 THRU DEC 84

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFEEN

RECORD ID: 84083090800 (CONTINUED) ***

AT 0213 HRS ON 30 AUG 84, FIRE DEPT. RECEIVED A CALL FROM OCCUPANTS OF BLDG 58 THAT THE HALON 1301 SYSTEM HAD DUMPED IN THE FIELD ENGINEER'S OFFICE. UPON ARRIVAL THE ON DUTY ASS'T CHIEF FOUND THAT THE HALON SYSTEM HAD CROSS-ZONED AND DUMPED AS DESIGNED. THE CAUSE OF THE ACTIVATION HOWEVER, WAS A DIRECT LIGHTING HIT TO THE STRUCTURE. NO FIRE WAS DISCOVERED. FURTHER, INVESTIGATION REVEALED THAT THE RADIO ALARM TRANSMITTER AS WELL AS CONTROLS ON THE HALON PANEL HAD BEEN SHORTED OUT APPARENTLY BY THE LIGHTNING. THEREFORE, NO ALARM WAS TRANSMITTED TO THE FIRE ALARM CENTER. HALON REPLACEMENT COST: \$17,000 TIME IN: 0426 HRS.

Computer - Data Processing Center

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----		NON GOVERNMENT PROPERTY DAMAGE LOSSES -----		NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE PROPERTY	INJ	DEATHS
VALUE: NOT REPTD \$250	NOT REPTD \$0	\$0		0	0
LOSS: \$10,069		\$10,319			

EMCS PERSONNEL WERE PERFORMING RECURRING MAINTENANCE TESTS ON THE BUILDING FIRE ALARM SYSTEM. AN ATTEMPT WAS MADE TO TEST A DETECTION LOOP BY SHORTING ACROSS THE TERMINALS AT THE CONTROL PANEL; HOWEVER, THE SHORT WAS MADE ACROSS THE HALON DETECTION LOOP BY MISTAKE. THE FIRE ALARM CENTER HAD BEEN NOTIFIED OF THE MAINTENANCE TESTING AND DID NOT REACT TO THE ALARM. WHEN NOTIFIED OF THE DUMP VIA ADMINISTRATIVE PHONE, FIRE EQUIPMENT WAS DISPATCHED. LOSS FIGURES REFLECT HALON COST (\$9,000), DAMAGED CEILING TILES (\$50), AND LABOR COST (\$1260).

84072591300 *Electronic Equipmt Room. No Collateral Damage*

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----		NON GOVERNMENT PROPERTY DAMAGE LOSSES -----		NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE PROPERTY	INJ	DEATHS
VALUE: NOT REPTD \$1,723	\$0	\$0		0	0
LOSS: \$1,723	\$0	\$1,723			

RECEIVED AUTOMATIC FIRE ALARM FOR BLDG 210, NAVAL RESEARCH LABORATORY. UPON ARRIVAL AND INVESTIGATION FOUND THAT THE HALON SYSTEM HAD DISCHARGED. ENGINE COMPANY PERSONNEL COULD FIND NO CAUSE FOR DISCHARGE AND RESET ALARM SYSTEM. PUBLIC WORKS ELECTRICIAN CHECKED THE ENTIRE SYSTEMS AND STATED THAT THERE WAS A MALFUNCTION IN THE INCIDENT DETECTION SYSTEM THAT CAUSED THE ALARM. COST INCLUDES ALL COST PER CONTRACTED MAINTENANCE AGREEMENT.

Refuse Audio-Visual Agency - no damage

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SHORE FIRE MANAGEMENT REPORT

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10 APR 91

JOB NUMBER: R0511EA
JOB TITLE: DOD FXD EXT SYS W/ DMAGE
TIME FRAME: JAN 84 THRU DEC 84
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 84102491900 (CONTINUED) ***

AT 1053, A CODED ALARM WAS RECEIVED FROM BLDG 5-800, REGION OPERATION CONTROL CENTER (ROCC). DURING RESPONSE REPORTED TH AT THE HALON SYSTEM HAD DISCHARGED. HALON ENUNCIATOR PANEL SHOWED A NUMBER SMOKE DETECTORS HAD ACTIVATED. PERSONNEL IN F ACILITY REPORTED A DIESEL SMELL JUST PRIOR TO HALON DISCHARGE. INVESTIGATION REVEALED THAT A CONTRACTOR HAD PARKED HIS 2 1/2 TON TRUCK WITH THE ENGINE RUNNING NEXT TO A FRESH AIR INTAKE (APPROXIMATELY 20' X 20') LOCATED OUTSIDE THE FACILITY . HE THEN STARTED A PORTABLE DIESEL GENERATOR THAT WAS LOCATED IN ONE OF THE TRUCK'S COMPARTMENTS. MOST PROBABLE CAUSE O F SMOKE DETECTOR'S ACTIVATION WAS THE COMBINATION OF TRUCK AND GENERATOR EXHAUST. IT WAS REPORTED THAT FIRE ALARM BELLS D ID NOT RING. THERE IS A BUILT IN 30 SECOND DELAY FOR THE HALON DISCHARGE ONCE SECOND SMOKE DETECTOR HAD ACTIVATED BECAUS E OF FAILURE BELL TO NOTIFY OCCUPANT'S ABORT BUTTON WAS NOT USED. ONGOING INVESTIGATION IS BEING CONDUCTED. ESTIMATED LOS S IS FOR RESERVICING OF HALON ONLY.

Communications Facility at AFB

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SHORE FIRE MANAGEMENT REPORT

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10 APR 91

JOB NUMBER: R0511EA
JOB TITLE: DOD FXD EXT SYS W/ DMAGE
TIME FRAME: JAN 84 THRU DEC 84
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 84120390200 (CONTINUED) ***

--- CASUALTY # 1 ---

CATGY: CIV SVC PERS TYPE: ACTION SEV: INJURY AGE: 27 TIME: 0947 SEX: F SVC/AFF: AIR FORCE FAMILY W/STRUCT: OVER 1 YEAR
COND BEFORE INJ: AWAKE, UNIMPAIRED
CAUSE OF INJ: EXPOSED TO CHEMICALS, RADIATION
ACTY AT TIME: ESCAPING
NATURE OF INJ: NOT CLASSIFIED
DISPOSITION: TAKEN TO HOSPITAL BY NON-FD VEHICLE

--- CASUALTY # 2 ---

CATGY: CIV SVC PERS TYPE: ACTION SEV: INJURY AGE: 26 TIME: 0947 SEX: M SVC/AFF: AIR FORCE FAMILY W/STRUCT: OVER 1 YEAR
COND BEFORE INJ: AWAKE, UNIMPAIRED
CAUSE OF INJ: EXPOSED TO CHEMICALS, RADIATION
ACTY AT TIME: ESCAPING
NATURE OF INJ: NOT CLASSIFIED
DISPOSITION: TAKEN TO HOSPITAL BY NON-FD VEHICLE

AT 0947 HOURS, RECEIVED TELEPHONE NOTIFICATION FROM ALARM MAINTENANCE THAT THE HALON 1301 SYSTEM IN THE COMPUTER ROOM IN 1335E HAD BEEN ACCIDENTALLY ACTIVATED. INVESTIGATION REVEALED THAT THE EYETEM WAS MANNUALLY ACTIVATED WHEN MAINTENANCE PERSONNEL TIGHTENED THE FITTING ON NITROGEN SYSTEM. TWO PERSONS WERE TAKEN TO THE HOSPITAL FOR HALON GAS INHALATION. CAS UALTY #1 WAS IN THE BACK OF THE COMPUTER ROM WHEN THE SYSTEM WAS ACTIVATED. IT TOOK HER 45 SECONDS TO LEAVE THE AREA. AF TER A WHILE, CASUALTY CPLAINED OF RESPIRATORY DIFFICULTY, DIZZINESS AND SKIN IRRITATION. SHE WAS TAKEN TO THE HOSPITAL FOR EXAMINATION. CASUALTY #2 WAS IN THE BACK OF THE COMPUTER ROOM WHEN SYSTEM WAS ACTIVATED. IT TOOK HIM 45 SECONDS TO L EAVE THE AREA. AFTER A WHILE, CASUALTY COMPLAINED OF RESPIRATORY DIFFICULTY AND SKIN IRRITATION. HE WAS TAKEN TO THE HOS PITAL FOR EXAMINATION.

Computer Room, No Collateral Damage

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----		NON GOVERNMENT PROPERTY DAMAGE LOSSES -----		
STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE PROPERTY	INJ DEATHS
VALUE: \$1,379,898	\$5,918,328	\$7,298,226		0
LOSS: \$5,000	\$0	\$5,000		0

AT 0824 HOURS, RECEIVED AUTOMATIC ALARM FROM BUILDING 1414. ON ARRIVAL, DISCOVERED THAT THE HALON 1301 SYSTEM HAD DISCHARGED. INVESTIGATION REVEALED THAT A STEAM LEAK UNDER THE COMPUTER FLOOR AREA ACTIVATED THE SMOKE DETECTORS, CAUSING THE HALON SYSTEM TO DISCHARGE.

Record I.D. 84126290300 Computer Data Processing Center

APPENDIX B INADVERTANT OPERATION OF HALON SYSTEMS NAVY SAFETY CENTER DATA, 1985

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SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY
JOB NUMBER: R0511EA
JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE
TIME FRAME: JAN 85 THRU DEC 85
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 85051691700 (CONTINUED) ***

AT 1000 INSPECTOR OF THE INSPECTION BRANCH, CRC FIRE DIVISION, ARRANGED WITH OCCUPANT IN CHARGE, OF BUILDING #7, COMPUTE R PROGRAM MAINTENANCE FACILITY, NAVAL SHIP WEAPONS SYSTEMS ENGINEERING, TO CONDUCT ALSO SCHEDULED TO ASSIST IN CONDUCTIN G THE DRILL. AT 1430 INSPECTOR SHUNTED OUT THE MASTER FIRE ALARM BOX CONTROLLING BUILDING #7, AND ENTERED TO CONDUCT A F IRE DRILL. INSPECTOR INADVERTENTLY ACTIVATED A SWITCH BOX MARKED "CARDOX", THINKING IT WAS A MANUAL FIRE ALARM PULL STAT ION, INTENDING TO HOLD THE ARRANGED FIRE DRILL. INSPECTOR ASSUMED THAT SINCE SWITCH WAS MARKED "CARDOX" IT WAS NOT A PAR T OF THE HALON EXTINGUISHING SYSTEM INSTALLED IN TH BUILDING. ACTIVATION OF THIS SWITCH BY INSPECTOR DISCHARGED 700 POUN DS OF HALON 1301 INTO THE UNDERFLOOR AREA OF THE COMPUTER PORTION OF THE BUILDING.

STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE PROPERTY	INJ	DEATHS
VALUE: \$0	NOT REPTD	\$0		0	0
LOSS: \$0	\$300	\$300			

ID 85092790703

AN AUTOMATIC FIRE ALARM WAS RECEIVED FROM THIS FACILITY AT 0648. ARRIVAL AND FURTHER INVESTIGATION REVEALED A HALON DUMP IN THE COMPUTER AREA, ROOM 3340. FIRE WAS NOT A FACTOR IN THE SYSTEM ACTIVATION. WATER INHIBITED THE CONDUIT AND THE ST EM TIMER WAS ACTIVATED. A NORMAL OPERATION OF THE INSTALLED HALON SYSTEM FOLLOWED. A

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SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY
JOB NUMBER: R0511EA
JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE
TIME FRAME: JAN 85 THRU DEC 85
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 85012291700 (CONTINUED) ***

AT 1506, YPG ALARM ROOM RECEIVED ALARM FROM BLDG. 5100. A 750 GPM PUMPER, A 250 GPM PUMP, RESCUE TRUCK, AND FIRE CHIEF'S VEHICLE WAS DISPATCHED. UPON ARRIVAL OF BUILDING 5100, RESCUE PERSONNEL WERE INSTRUCTED TO CHECK BUILDING. INVESTIGATIO N INDICATED THAT THERE WERE NO PROBLEMS AT BUILDING 5100. AT 1516 HOURS, THE FIRE DEPARTMENT DISPATCH WAS NOTIFIED THAT THE HALON SYSTEM IN BUILDING 3125 HAD DISCHARGED. AT 1519, ALL FIRE DEPARTMENT UNITS ARRIVED AT BUILDING 3125. INVESTIGA TION INDICATES TAT AN OCCUPANT OF BUILDING WAS HEATING A CAN OF SOUP ON A HOT PLATE. THE SOUP BOILED OVER ONTO HOT PLATE CAUSING STEAM & SMOKE IN AREA. THE SMOKE ALARM IN ROOM ACTIVATED THE HALON SYSTEM IN BUILDING. BUILDING DID NOT TRANSMI T TO FIRE STATION. THE PROBLEM WITH THE SYSTEM WAS CORRECTED IN JANUARY 25, 1985.

JOB NUMBER: R0511EA
 JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE
 TIME FRAME: JAN 85 THRU DEC 85
 PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: R5091290500 (CONTINUED) ***

ON SEPTEMBER 12, 1985 @ 0443 HRS. CREWS RESPONDED TO BLDG. 1210 BASMENT (G-11) FORT HALON ALARM SOUNDING. UPON ARRIVAL F
 OUND HALON SYSTEM ACTIVATED, NO FIRE INDICATED OUTSIDE OF ROOM. CREWS WAITED 15 MINUTE BEFORE ENTERING ROOM AND FOUND BO
 TH CEILING AND FLOOR HALON TANKS DISCHARGED. NO CAUSE WAS FOUND. DOD GUARD INDICATED HE CALLED MS. SECURITY OFFICER-SDSC
 COMPUTER AREA. THERE WAS A PROBLEM WITH THE AIR CONDITIONING UNITS FOR THIS AREA. AVI FIRE DEPARTMENT UNITS RETURNED TO
 QUARTERS.

Computer

STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE PROPERTY	INJ	DEATHS
VALUE: NOT REPTD	\$0	\$0		0	0
LOSS: \$3,000	\$0	\$3,000			

ID 85061690400

ENG H3 RESPONDED TO BLDG 2705 ON A ACTIVATED HALON ALARM. UPON ARRIVAL THE DOD GUARDS DIRECTED ENG H3 TO THE VAULT. ALAR
 M PANEL WOULD NOT RESET. REQUESTED THE CUSTODIAN TO CALLED TO THE SCENE. THE CUSTODIAN SUGGESTED WE WAIT TILL MORNING. W
 ORK ORDER WAS CALLED IN BY THE FORT MONMOUTH FIRE DEPT DIPATHER. ENG H3 AT THIS TIME RETURNED TO STATION H3.

Electronics Laboratory

STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE PROPERTY	INJ	DEATHS
VALUE: \$0	\$4,381	\$4,381		0	0
LOSS: \$0	\$4,381	\$4,381			

ID 85091290600

ON SEPTEMBER 12 1985 AT 0909 HRS CREWS RESPONDED TO BLDG. 1210 BASEMENT (G03 G02) FOR HALON ALARM SOUNDING UPON ARRIVAL
 FOUND HALON SYSTEM ACTIVATED NO FIRE INDICATED OUTSIDE OF ROOM. UPON INSPECTION FOUND 3 FLOOR HALON TANKS DISCHARGED NO
 CAUSE WAS FOUND.

Computer Rm 674 2nd Hellen

RECORD ID: 85122290200 (CONTINUED) ***

AT 1920 AN OCCUPANT FRM BUILDING 29808, COMPUTER ROOM, NOTIFIED THE FIRE DEPARTMENT THE FIRE ALARM SYSTEM HAD ACTIVATED.
 THE ASSIST FIRE CHIEF AND A STRUCTURAL PUMPER RESPONDED. UPON ARRIVAL THE ASSIST CHIEF FOUND THE FIRE ALARM ACTIVATED A
 ND THE HALON 1301 FIRE SUPPRESSION SYSTEM IN THE ABORTED POSITION. THE AREA WAS CHECKED, THE FIRE ALARM BELLS SILENCED,
 AND THE FIRE ALARM RESET. APPROX FIVE SECONDS AFTER THE ALARM WAS RESET, THE HALON 1301 SYSTEM DISCHARGED. INVESTIGATION
 INDICATED OCCUPANTS WERE BURNING PAPER IN AN ASHTRAY AND ACTIVATED THE FIRE ALARM SYSTEM SMOKE DETECTOR. THE OCCUPANTS A
 BORTED THE HALON 1301 SYSTEM AND NOTIFIED THE FIRE DEPARTMENT. THE ASSIST FIRE CHIEF RESET THE ALARM, AND A FEW SECONDS
 LATER THE HALON 1301 SYSTEM PREMATURELY DISCHARGED WITH THE ABORT SWITHC IN THE ABORT POSITION. THE MOST PROBABLE CAUSE
 IS A BAD CIRCUIT BOARD IN THE FIRE ALARM SYSTEM CONTROL PANEL.

Electronic Equip in office

22 JAN 91

SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 85 THRU DEC 85

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 85012191400 (CONTINUED) ***

ON 21 JANUARY 1985 AT 1819 HOURS FIRE STATION #1 RECEIVED AN AUTOMATIC ALARM FROM BUILDING 10262 FROM THE COMPUTER ROOM. UPON ARRIVAL IT WAS ASCERTAINED THAT SMOKE DETECTORS WERE TRIPPED IN ZONES 9 AND 10. THE SMOKE DETECTORS WERE CHECKED AND NO PROBLEM WAS FOUND. RESET BUTTONS WERE PUSHED WHICH CLEARED THE PANEL. CORRECT PROCEDURES WERE FOLLOWED IN RESETTING THE HALON AND ALARM PANELS. AT THAT TIME THE HALON SYSTEM DISCHARGED APPARENTLY FROM A MALFUNCTION IN THE SYSTEM DUE TO A POWER OUTAGE IN THE BUILDING. THE BATTERY BACK-UP INCORPORATED INTO THE FIRE ALARM SYSTEM BOX HAD BEEN OUT OF SERVICE FOR SEVERAL MONTHS. HALON MAINTENANCE IS ACCOMPLISHED BY SERVICE CONTRACT. NO ONE BID ON THE LAST MAINTENANCE STATEMENT OF WORK (SOW). THE SOW WAS RE-SOLICITED AND BIDS WERE OPENED ON 28 JAN 85. THERE WAS ONE BID. THE LOW BID WILL BE GIVEN THE NOTICE TO PROCEED ON 8 JAN 85. AIR FORCE LOSS WAS \$8,000.00. THERE WERE NO INJURIES.

Offices - Computer Rm.

RECORD ID: 85050590700 (CONTINUED) ***

ON 5 MAY 1985, AT 21:04 HOURS, THE COMMUNICATIONS CENTER RECEIVED A CODED ALARM FROM BUILDING 647 AND WAS NOTIFIED VIA A DIRECT LINE OF THE FIRE ALARM ACTIVATION. UPON ARRIVAL, PERSONNEL WERE EVACUATING THE BUILDING. INVESTIGATION DETERMINED THAT THE HALON FIRE SUPPRESSION SYSTEM HAD BEEN ACTIVATED AND DISCHARGED. THE CAUSE OF THE INCIDENT WAS THE UNAUTHORIZED BURNING OF MATERIAL INSIDE THE BUILDING WHICH ACTIVATED THE SMOKE AND HALON SYSTEMS. THERE WAS NO FIRE DAMAGE. THE HALON SYSTEM WAS COMPLETELY DISCHARGED AND IT COST APPROXIMATELY \$4000.00 TO PLACE THE SYSTEM BACK IN SERVICE. DUE TO THE UNAUTHORIZED NATURE OF THE INCIDENT, THE SQUADRON COMMANDER HAS BEEN REQUESTED TO INVESTIGATE AND MAKE CORRECTIVE ACTIONS AND TO DETERMINE FINANCIAL LIABILITY.

Electronic Equipment Rm.

RECORD ID: 85051090700 (CONTINUED) ***

AT 0948, A TROUBLE ALARM WAS RECEIVED ON OUR CENTRAL STATION RECEIVER FOR THE COMPUTER ROOM AT BLDG 243. ONE P-8 PUMPER WAS DISPATCHED TO CHECK OUT THE PROBLEM. UPON ARRIVAL, THE TROUBLE BELLS WERE SOUNDING. PUMPER CREW CHIEF WAS ATTEMPTING TO RESET THE ALARM PANEL TO THE HALON SYSTEM WHEN HE ACTIVATED THE SYSTEM. THERE WAS NO FIRE, ALL OCCUPANTS EVACUATED. ASST CHIEF AND RESCUE (P-10) RESPONDED TO ASSIST IN VENTILATION OF COMPUTER ROOM. ALARM WAS SECURED. INVESTIGATION REVEALED PUMPER CREW CHIEF WAS UNFAMILIAR WITH HALON SYSTEM AND INADVERTENTLY DISCHARGED SYSTEM.

RECORD ID: 85052491000 (CONTINUED) ***

AT 1600 HOURS, 24 MAY 1985, THE BASE FIRE DEPARTMENT WAS NOTIFIED VIA 117 THAT THE OCCUPANTS OF BUILDING 1528 HEARD A LOUD BANG AND WHAT APPEARED TO BE SMOKE COMING FROM THE FLOOR. OCCUPANTS OF THE FACILITY SHUT OFF THE MAIN BREAKER TO THE BUILDING AND EVACUATED. UPON ARRIVAL FIRE DEPARTMENT PERSONNEL CHECKED THE UNDER FLOOR CRAWL SPACE AND FOUND NOTHING. THEY THEN CHECKED THE HALON STORAGE BOTTLES AND FOUND THE STORAGE BOTTLE TO THE UNDER FLOOR EXTINGUISHING SYSTEM HAD DISCHARGED. CAUSE UNKNOWN.

Computer Room

SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA
 JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DAMAGE
 TIME FRAME: JAN 85 THRU DEC 85
 PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFEEN

22 JAN 91

RECORD ID: 85072190800 (CONTINUED) ***

AT 2222 HOURS, 21 JUL 1985, THE COMMUNICATIONS CENTER RECEIVED AN AUTOMATIC ALARM CODE FROM BUILDING 2670. ONE P-10, ONE STRUCTURAL PUMPER AND ASSISTANT CHIEF RESPONDED, ON ARRIVAL NO FIRE WAS EVIDENT BUT THE HALON SYSTEM HAD ACTIVATED IN THE COMPUTER ROOM. A THOROUGH CHECK OF THE FACILITY WAS MADE AND NO EQUIPMENT WAS DAMAGED, ONE SMOKE DETECTOR IN THE CEILING AND ONE UNDERNEATH THE FLOOR ACTIVATED CAUSING THE HALON DISCHARGE OF ONE CYLINDER. NO EQUIPMENT HAD BEEN IN USE WITHIN THAT AREA. VENTILATION OF THE ROOM BY SMOKE EJECTORS AND INSPECTION OF THE DETECTORS WAS ACCOMPLISHED BY THE PUMPER AND RESCUE CREWS. A CHECK OF THE ALARM AND HALON SYSTEMS WAS MADE AND NO PROBLEMS WERE DISCOVERED. THE CAUSE OF THE ACTIVATION AND HALON DISCHARGE IS UNKNOWN, AT THIS TIME, A COMPLETE INSPECTION OF THE HALON SYSTEM WILL BE CONDUCTED TO DETERMINE THE CAUSE OF ACTIVATION AND DISCHARGE. IT COST \$1,062 TO PUT THE HALON SYSTEM BACK IN SERVICE.

STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE PROPERTY	TOTAL	INJ	DEATHS
VALUE: \$342,610	\$1,000,000	\$1,342,610		\$0	0	0
LOSS: \$0	\$0	\$0		\$0		

FD 95071791700

1430 HRS, FIRE ALARM CENTER RECEIVED A TROUBLE SOUND FROM BLDG 4 AT SUBBURY. WHILE TESTING THE CIRCUITS, THE SYSTEM WAS ACTIVATED WITH AUTOMATIC DUMP OF TWO (2) 190 LB TANKS OF HALON. NO PRE-WARNING WAS RECEIVED. ESTIMATED ORGANIZATION LOST DUE TO DOWN TIME 4,100.00. ESTIMATED COST FOR REPAIR AND SERVICE IS 4,500.00. *Radur Site*

RECORD ID: 85072991500 (CONTINUED) ***

29 JULY 1985 APPROXIMATELY 1515 HOURS, FIRE DEPT TECHNICAL SERVICES SECTION RECEIVED NOTIFICATION A HALON 1301 DISCHARGE AT BLDG 1020 IFAST. PRIMARY HALON BANK HAD DISCHARGED. A THOROUGH CHECK FAILED TO INDICATE THE REASON FOR DISCHARGE. CONTRACTOR CONCLUSIONS WERE. DISCHARGE WAS POSSIBLE CAUSED BY (A) STRAY ELECTRICAL VOLTAGE WHICH SPIKED HIGH ENOUGH TO ACTIVATE THE SOLENOID OR A LEAK IN THE CYLINDER PILOT VALVE ASSEMBLY BUILT UP PRESSURE HIGH ENOUGH TO TRIGGER THE OTHER CYLINDERS BY PRESSURE. SINCE NO VALVE HAD OPENED, THE PRESSURE RUPTURED THE GASKET ON TWO VALVE ASSEMBLIES AND DISCHARGED. LOSS UNKNOWN. *Reader Site*

VALUE: \$0	\$0	\$0	\$0	0	0
LOSS: \$0	\$0	\$0	\$0		

FD-850631491200

GOVERNMENT LOSS IS A NON-FIRE LOSS FROM THE LOSS OF 110 POUNDS OF HALON 1301 WHEN THE SYSTEM ACTIVATED AFTER POWER FAILURE AND POWER WAS RESTORED AND EXCESS DUST MOVEMENT UNDER THE FLOOR CAUSED THE ACTIVATION OF SMOKE DETECTORS. APPROXIMATE LOSS-\$884.00. *Electrician Egypt Km. Silver*

22 JAN 91

SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA
 JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE
 TIME FRAME: JAN 85 THRU DEC 85
 PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 85081890700 (CONTINUED) ***

AT 2334 HOURS, 18 AUG 1985, THE COMMUNICATIONS CENTER RECEIVED AND AUTOMATIC ALARM CODE FROM BUILDING 2670. ONE -10, ONE STRUCTURAL PUMPER AND ASSISTANT CHIEF RESPONDED. ON ARRIVAL NO FIRE WAS EVIDENT BUT THE HALON SYSTEM HAD ACTIVATED IN THE COMPUTER ROOM. A THOROUGH CHECK OF THE FACILITY WAS MADE AND NO EQUIPMENT WAS DAMAGED. ONE SMOKE DETECTOR IN THE CEILING AND ONE UNDERNEATH THE FLOOR ACTIVATED CAUSING THE HALON DISCHARGE OF ONE CYLINDER. NO EQUIPMENT HAD BEEN IN USE WITHIN THAT AREA. VENTILATION OF THE ROOM BY SMOKE EJECTORS AND INSPECTION OF THE DETECTORS WAS ACCOMPLISHED BY THE PUMPER AND RESCUE CREWS. A CHECK OF THE ALARM AND HALON SYSTEMS WAS MADE AND NO PROBLEMS WERE DISCOVERED. THE CAUSE OF THE ACTIVATION AND HALON DISCHARGE IS UNKNOWN AT THIS TIME. A COMPLETE INSPECTION OF THE HALON SYSTEM WILL BE CONDUCTED TO DETERMINE THE CAUSE OF ACTIVATION AND DISCHARGE. APPROXIMATE COST TO RESERVICE THE HALON SYSTEM IS \$1,062.00.

RECORD ID: 85082791000 (CONTINUED) ***

RESPONDED TO BOX 311 LINCOLN LAB COMPLEX AT 1307 ALARM INDICATED 1302D 3RD FLOOR. INVESTIGATION INDICATED A HALON SYSTEM HAD DUMPED IN ROOM 332 (THIN FILM LAB) WITH NO EVIDENCE OF FIRE OR SMOKE. ROOM 332 IS A "CLEAN" ROOM WITH AIR LOCKS IN THE CORRIDOR AND EACH ENTRY DOOR. IN A SMALL (5' X 5') UNOCCUPIED ROOM, DESIGNATED "SEM" ROOM, WITHIN ROOM 332, A 15 LB HALON SYSTEM HAD DUMPED, INITIATED BY CROSS-ZONING OF 2 SMOKE DETECTORS IN THAT ROOM, WITH NO APPARENT FIRE OR SMOKE CAUSE. ROOM 332 OCCUPANTS (APPROX 5) HEARING THE HALON SYSTEM DUMP IMMEDIATELY EXITED ROOM. BEFORE LAST PERSON EXITED, A MALE IN HALON SYSTEM (163 LBS), LOCATED IN ROOM 332 STARTED WITH WARNING BELLS, 2 SMOKE DETECTORS THAT WERE CROSS-ZONED ACTIVATED AND SYSTEM DUMPED, AGAIN WITH NO APPARENT FIRE OR SMOKE CONDITION. IN AN ADJOINING ROOM (PHOTO LITHOGRAPHY LAB) A PLUMBER STATED HE SMELLED LIGHT SMOKE, OTHERS IN ROOM 332 SMELLED OR SAW ANYTHING WRONG. AT THIS TIME CAUSE CANNOT BE DETERMINED AS TO WHY EACH SYSTEM ACTIVATED. NO ABNORMAL WORK OR UNUSUAL EXPERIMENTS WERE BEING CONDUCTED. DAMAGE CONSISTED OF PAPER AND DEBRIS BEING BLOWN ABOUT THE 2 ROOMS AND A GLASS BEAKER WAS BROKEN. INTEGRITY AND CLEANLINESS OF THE "CLEAN" ROOM WAS CONTAMINATED AND EXPERIMENTS IN PROGRESS WERE NEGATED. THE TWO HALON SYSTEMS DUMPED A TOTAL OF 178 LBS AND THE COSTS TO PLACE BACK IN SERVICE WILL HAVE TO BE CONSIDERED.

RECORD ID: 85100690900 (CONTINUED) ***

AT 1648 HOURS, 6 OCT 85, COMMUNICATIONS CENTER RECEIVED AN AUTOMATIC ALARM CODE (TROUBLE), FROM BUILDING 2670. ONE P-10 AND ASSISTANT CHIEF MADE A NONEMERGENCY RESPONSE. AT 1650 HOURS A CALL WAS RECEIVED FROM BUILDING OCCUPANTS STATING THE HALON SYSTEM HAD DISCHARGED IN THE COMPUTER ROOM. A THOROUGH CHECK OF THE FACILITY WAS CONDUCTED AND NO EQUIPMENT WAS DAMAGED. NO SMOKE DETECTORS WERE ACTIVATED AND NO DELAY TO ABORT ACTIVATION. NO EQUIPMENT, OTHER THAN THE AIR HANDLERS, WERE IN OPERATION WITHIN THAT AREA. THIS IS THE THIRD TIME THE HALON SYSTEM ACTIVATED SINCE JULY 1985. ON 26 SEPT 1985, TELE-FIRE WAS CONTRACTED TO CONDUCT A THOROUGH INSPECTION AND TEST OF THE SYSTEM AND CERTIFIED IT OPERATIONAL TO SPECIFICATIONS. APPROXIMATE COST TO SERVICE HALON SYSTEM IS \$1,500.00. ON 7 OCT 1985, TELE-FIRE WAS CONTACTED AND WILL REINSPECT THE SYSTEM ON 8 OCT 1985.

Computer Rm

FOR OFFICIAL USE ONLY

SHORE FIRE MANAGEMENT REPORT

PAGE: 119

JOB NUMBER: R0511EA

22 JAN 91

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 85 THRU DEC 85

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 85110291500 (CONTINUED) ***

NOW FIRE ALARM CENTER RECEIVED ALARM FOR THE DEFENSE INTELLIGENCE AGENCY COMPLEX, BUILDING 6000. ON ARRIVAL FOUND NO FIRE SITUATION. HOWEVER, THE ALARM HAD ACTIVATED SHOWING AN UNDERFLOOR DETECTOR. DURING THE INVESTIGATION AN APPARENT SYSTEM MALFUNCTION OCCURRED, CAUSING 1200 POUNDS OF HALON 1301 TO BE EXPELLED. THE SYSTEM WAS RESTORED USING THE RESERVE SUPPLY CYLINDERS.

Data Processing Center

FD 85110391200

ALARM ACTIVATION INDICATING HALON "TOTAL FLOOD" SYSTEM HAD DISCHARGED; UPON ARRIVAL, BUILDING HAD BEEN EVACUATED AND MOST OF THE AGENT HAD DISSIPATED. AFTER INTERVIEWING SEVERAL OCCUPANTS, IT WAS DETERMINED THAT THE SYSTEM HAD BEEN INADVERTENTLY ACTIVATED BY AN EMPLOYEE. THE TOGGLE SWITCH, WHICH INITIATES THE SEQUENCE, HAD BEEN IN THE "ABORT" MODE DUE TO MAINTENANCE BEING PERFORMED ON THE DETECTION SYSTEM. THE INDIVIDUAL FLIPPED THE SWITCH BACK TO "NORMAL", MISTAKENLY THINKING HE WAS RETURNING THE SYSTEM BACK TO IT'S NORMAL POSITION. THE SYSTEM DISCHARGED BECAUSE THE DETECTORS HAD NOT BEEN CLEAR AT THAT TIME. DOLLAR LOSS IS FOR AGENT USED. NO INJURIES.

20144 UNCLAS

STRUCTURE/MOBILE	CONTENTS	TOTAL	TOTAL	TYPE PROPERTY	INJ	DEATHS
VALUE: \$9,718,000	\$11,900,000	\$21,618,000	NOT REPTD	CONTRACTOR PROPERTY	0	0
LOSS: \$0	\$0	\$0	\$4,120			

FD 85121791700

AT 1141 HOURS, RECEIVED A CALL VIA DIRECT LINE FROM SECURITY POLICE DESK IN BLDG. 1535 REPORTING THE HALON SYSTEM ACTIVATED IN E WING, ROOM 110. UPON ARRIVAL, HALON SYSTEM HAD ACTIVATED. FIRE ALARM MAINTENANCE WAS REQUESTED TO RESPOND TO THE LOCATION, TO CHECK FOR MALFUNCTION OF SYSTEM. INVESTIGATION REVEALED THAT A POWER OUTAGE WAS SCHEDULED FOR THAT AREA FROM 0700 UNTIL 1500 HOURS. THE POWER WAS OFF FROM 0740 HOURS UNTIL 1210 HOURS. SUBSEQUENT EVENTS OF AIR HANDLERS NOT OPERATIONAL, CAUSED A FLUCTUATION IN TEMPERATURE, ACTIVATING THE HALON SYSTEM. THE SYSTEM WAS PLACED BACK IN SERVICE AT 1830 HOURS ON 17 DEC 85, AT THE COST OF \$4,120. FUTURE POWER OUTAGES WILL BE COORDINATED TO PRECLUDE SUCH INCIDENTS AS THIS.

of file

FD 85121791700

AT 0916 RECEIVED 4 ROUND CODE 8 BLDG 3010 GLOBAL WEATHER SECTION UPPER LEVEL. CH #1, RESCUE #6, AND ENGINE #8 WAS DISPATCHED. PRIOR TO THEIR ARRIVAL, A CALL WAS RECEIVED FROM GLOBAL WEATHER PERSONNEL REPORTING THAT THE HALON SYSTEM HAD ACTIVATED WITHOUT CAUSE. AN INVESTIGATION WAS CONDUCTED. THE CAUSE OF THE HALON SYSTEM ACTIVATION, DETERMINED. SYSTEM WAS SECURED AND CONTRACTOR WAS NOTIFIED. THE HALON SYSTEM WAS RECHARGED AND RETURNED TO SERVICE. THE HALON SYSTEM DISCHARGED 470 LBS OF AGENT, COSTING \$3,910.00 IN RESERVICING COSTS. THERE WAS NO FIRE DOLLAR LOSS.

Computer Room

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APPENDIX B INADVERTANT OPERATION OF HALON SYSTEMS NAVY SAFETY CENTER DATA, 1986

PAGE: 95

SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA
JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE
TIME FRAME: JAN 86 THRU DEC 86
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

22 JAN 91

RECORD ID: 86123191400 (CONTINUED) ***

A CODED ALARM WAS RECEIVED FROM BLDG 1414 AT 0829. THE ALARM ROOM OPERATOR IMMEDIATELY CONTACTED UNIT 8 WHO WAS ON STAND BY AT THE BUILDING FOR A WELDING OPERATION. UNIT 8 CONFIRMED THAT THE CO2 SYSTEM HAD ACTIVATED AND DUMPED. NO FIRE WAS REPORTED. ADDITIONAL FIRE DEPARTMENT PERSONNEL WERE DISPATCHED AND ARRIVED AT 0833. UPON ARRIVAL, SEVEN MMS PERSONNEL INSIDE THE BUILDING WERE ACCOUNTED FOR AND TWO CE WELDERS THAT WERE WORKING ON THE EXTERIOR. THE SEVEN MMS PERSONNEL ESCAPED WITHOUT ASSISTANCE. THE CAUSE OF THE SYSTEM BEING DUMPED WAS ACTIVATION OF THE ULTRAVIOULET DETECTORS BY AN ARC WELDER OPERATING ON THE EXTERIOR OF THE BUILDING. CE CRAFTSMEN WERE STRUCTING A PROTECTIVE ROOF OVER THE CO2 STORAGE TANK ADJACENT TO THE BUILDING. ONE CRAFTSMAN WAS WORKING ON THE EXTERIOR APPROXIMATELY 6 FEET OFF THE GROUND AND 8 FEET AWAY FROM THE PERSONNEL DOOR. AS A TACK WELD WAS BEING DONE THE OTHER WELDER EXITED THE BUILDING THROUGH THE PERSONNEL DOOR ALLOWING THE LIGHT FROM THE ARC WELDER TO PASS THROUGH THE OPENING. THE LIGHT REFRACTED OFF OF THE CONCRETE FLOOR AND UP TO THE DETECTORS ATTACHED TO THE INTERIOR ROOF JOISTS APPROXIMATELY 25 FT ABOVE THE FLOOR. COST OF THE CO2 REPLACEMENT WAS APPROXIMATELY \$2000, THE TANK CAPACITY IS 16000 POUNDS. EMERGENCY WAS TERMINATED AT 0945 BY THE ASSISTANT CHIEF ON DUTY. THE LAST EHICLE RETURNED TO THE STATION AT 0952. NO DAMAGE TO BLDG. CONTENTS.

RECORD ID: 86120790600 (CONTINUED) ***

RECEIVED CALL VIA TELEPHONE OF BELLS RINGING IN BLDG 1302D. E-2, R-3, C-2, AND C-8 RESPONDED. WHILE RESPONDING ARO RECEIVED A CALL THAT ALARM INDICATED 4TH FLOOR. R-3 ENTERED BLDG AND DISCOVERED FROM THE FIRE ALARM PANEL THAT THERE WAS A HALON DISCHARGE INSIDE ROOM D464. R-3 ENTERED ROOM WEARING PROTECTIVE CLOTHING AND SCBA AND VERIFIED HALON DISCHARGE. HOWEVER THERE WAS NO EVIDENCE OF FIRE. THERE WERE THREE AIR CONDITIONER VENTS THAT DID HAVE WATER DRIPPING FROM THEM. COMPUTERS HAD SHUT DOWN AUTOMATICALLY. ALARM SYSTEM WAS RESET. COMPUTERS WERE STARTED TO SEE IF THERE WAS ANY DAMAGE THERE APPEARED TO BE NONE. THERE WAS A LOT OF PAPER ALL OVER THE FLOOR FROM THE FORCE OF THE HALON BEING DISCHARGED. PROBLEM SEEMS TO BE FROM HUMIDITY AND THE AIR CONDITIONER. IT SEEMS THE AIR CONDITIONER VENTS WERE EXITING A MIST SETTING OFF TWO DETECTORS IN TWO SEPARATE ZONES SETTING OFF THE HALON SYSTEM. HOWEVER THIS CANNOT BE CONFIRMED. WHEN AIR CONDITIONER WAS STARTED AGAIN, THERE WAS NO MIST.

ID 8611129100

RESPONDED TO AN AUTOMATIC ALARM AT BLDG 1212L. UPON ARRIVAL, CREWS FOUND A HALON SYSTEM HAD BEEN DUMPED IN ROOM 231, HOWEVER, NO FIRE SITUATION WAS EVIDENT. FURTHER INVESTIGATION REVEALED THAT A FREON LINE ON A COMPRESSOR HAD BROKEN AND SET OFF ALL DETECTORS AT ONCE. THIS CAUSED AN AUTOMATIC DUMP OF THE 60 LBS HALON SYSTEM. UNITS RESPONDING WERE ENGINE 1 & 2, RESCUE 3, AND CHIEF 2.

"Offices" - (Electronics Lab 1)

ID 86072490700

ON 24 JULY 1986 AT 2102 HOURS, FIRE STATION #1 RECEIVED AN AUTOMATIC ALARM FROM BLDG. 262, POST 6-F. ON ARRIVAL FIREFIGHTERS DETERMINED THERE WAS NO FIRE BUT THE HALON SYSTEM IN THE COMPUTER AREA HAD TRIPPED. THIS CAUSED DAMAGE TO THE CEILING TILES AND LOSS OF HALON. AIR FORCE LOSS ESTIMATED AT \$34,750.00. THERE WERE NO INJURIES.

3530 # of the Gen.

FOR OFFICIAL USE ONLY
JOB NUMBER: R0511EA

SHORE FIRE MANAGEMENT REPORT

PAGE: 82

22 JAN 91

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE
TIME FRAME: JAN 86 THRU DEC 86
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 86090490700 (CONTINUED) **

AT APPROXIMATELY 0905 HOURS, 4 SEP 86, MSGT A MARCH AFB TELEPHONE MAINTENANCE NCO CALLED THE FIRE PREVENTION SECTION AND ADVISED OF A HALON SYSTEM DISCHARGE AT BUILDING #2620. HE STATED THAT THE BUILDING WAS BEING EVACUATED, THE ALARM BELLS WERE SOUNDING AND THAT THERE WAS NO FIRE. UPON ARRIVAL BY THE FIRE DEPARTMENT, FINDING CONFIRMED THERE WAS NO FIRE AND THE COMPUTER ROOM HALON SYSTEM HAD DISCHARGED. INVESTIGATION REVEALED THAT THE MSGT WAS PERFORMING A SYSTEM INSPECTION/CH ECKOUT AND FOUND THE HALON SYSTEM WAS IN A TROUBLE CONDITION. HE PASSED THE "TEST PANEL SWITCH," AS OUTLINED IN THE OPER ATORS MANUAL. PRESSING OF THE TEST SWITCH CAUSED THE SYSTEM TO DISCHARGE. FURTHER INVESTIGATION REVEALED THAT THIS HALON SYSTEM HAD A MAINTENANCE PROBLEM BEFORE THE HALON DISCHARGED. THE SYSTEM HELD 130 LBS OF HALON 1301. THERE ARE NO PERME NANT ADVERSE EFFECTS OR MISSION DELAYS BECAUSE OF THIS SYSTEM ACTIVATION. APPROXIMATED COST TO RESERVICE HALON SYSTEM IS \$1,000.

RECORD ID: 86070891400 (CONTINUED) **

AT 1823 TELEPHONE MAINTENANCE PERSONNEL RESPONDED TO BLDG 301, RM.38, OF GLOBAL WEATHER TO ASSIST IN CHECKING OUT COMM L INES HOOKED TO THE FIRE ALARM PANEL. THE FIRE STATION'S MONACO RECEIVER WAS SHOWING A GROUND CONDITION IN FIRE LOOP 7. TELEPHONE MAINTENANCE REQUESTED F D TO OPEN THE ALARM PANEL IN RM 38 TO CHECK THE COMM LINES CONNECTIONS REQUESTED A CODE BE SENT TO THE FIRE STATION TO CHECK THE CONDITION OF THE LOOP. AT APPROX 2154, WITHOUT WARNING THE HALON SYSTEM DISCHA RGED. ALL PERSONNEL IMMEDIATELY LEFT THE ROOM. SOME HALON GAS ESCAPED INTO THE NEXT ROOM SETTING OFF THE DETECTORS AND A CTIVATING THE HALON SYSTEM. FIVE OF SIX COMPUTER ROOMS WERE ACTIVATED IN THIS MANNER. ONLY ONE ROOM WAS ABORTED IN TIME. THE RESCUE CREW REPORTED THE HALON DISCHARGE AND THE ASSISTANT CHIEF RESPONDED. UPON ARRIVAL THE ALARM SYSTEMS WERE STI NCED AND MAINTENANCE CONTRACTOR NOTIFIED TO RESPOND. ALL PFRSONNEL WERE INTERVIEWED AS TO WHAT HAD HAPPENED. PULL STATI ONS/DUMP STATIONS WERE CHECKED AND HAD NOT BEEN ACTIVATED. UPON ARRIVAL OF THE CONTRACTOR, HALON ACTIVATION COULD NOT BE DETERMINED. THE CONTRACTOR SUSPECTED A POSSIBLE SPIKE OR SURGE IN THE FIRE ALARM'S ELECTRICAL SYSTEM. AS ACTION TAKEN B Y TELEPHONE AND FIRE DEPARTMENT SHOULD NOT ACTIVATE THE SYSTEM, A CONTRACT IS BEING LET TO DETERMINE THE POSSIBLE PROBLE M AND/OR CAUSE. COST OF RESERVICING THE HALON SYSTEM WAS \$10,450.

ID 86090490700

20 JUNE 1986 AT 0816 HOURS, AN ELECTRICIAN ACCIDENTLY ACTIVATED THE MANUAL HALON RELEASE FOR THE HALON SYSTEM PROTECTING ROOM 211, INSTRUMENT SHOP, IN ASIF TEST BUILDING 912. ACTIVATION OCCURRED WHILE THE ELECTRICIAN WAS MAKING MODIFICATION (INTERIM CONTROL MEASURES) TO PRECLUDE ACCIDENTAL HALON DISCHARGES. INTERIM CONTROL MEASURES ARE NOW COMPLETE. WORK REQ UEST PREVIOUSLY SUBMITTED TO MODIFY ALL EXISTING HALON SYSTEMS TO MEET PROVISIONS OF CURRENT PUBLICATIONS IS STILL PENDI NG.

ID 86091271100

AT 0542 THE FIRE ALARM CENTER RECEIVED A 4-ROUND CODE FROM THE COMPUTER CENTER, BLDG 2248A. FIRE EQUIPMENT WAS DISPATCHED IMMEDIATELY. AT 0545, BLDG OCCUPANT CALLED AND ADVISED THE OPERATOR THAT HE ACTIVATED THE HALON SYSTEM. INITIAL INVESTIGATION REVEALED THAT THE FIRE DETECTION SYSTEM WENT INTO THE TROUBLE MODE AND THE BUILDING OCCUPANT TRIED TO RESET THE SYSTEM. THE SYSTEM WOULD NOT RESET SO HE ELECTED TO ACTIVATE THE MANUAL DUMP OF THE HALON SYSTEM. THE OCCUPANT THOUGHT IT IS BETTER SAFE THAN SORRY WITH ALL THE EXPENSIVE COMPUTER EQUIPMENT. COST TO RESERVICE THE SYSTEM WAS \$2,980.00. VEHIC LES RETURNED TO THE STATION 0648.

STRUCTURE/MORILE	CONTENTS	TOTAL	TOTAL	TYPE PROPERTY	INJ	DEATHS
VALUE:	\$0	\$0	\$0		0	0
LOSS:	\$0	\$0	\$0		0	0

JD 86091890100

SMOKE DETECTOR ACTIVATED IN COMPUTER ROOM 103 BLDG 1210. FIRE DEPT SILENCED ALARM AT W161C16 TIME HALON SYSTEM ACTIVATED
 . UPON COMPLETION OF ACTIVATION ABORT ALARM SOUNDED. NO FIRE OR REASON FOR HALON SYSTEM TO ACTIVATE.

RECORD ID: 86101590100 (CONTINUED) ***

THE FIRE DEPARTMENT DISPATCH RECEIVED A CODED ALARM FROM BLDG #400 AND AT APPROXIMATELY THE SAME TIME RECEIVED A TELEPHONE CALL FROM THE EMPLOYEES STATING IT WAS A FIRE ALARM AND NO FIRE. EMG #2 RESPONDED AND FOUND THE HALON SYSTEM IN ZONE #7 HAD DUMPED FOR NO APPARENT REASON. EMPLOYEES STATED THERE WAS NO BELL OR HORN WARNING BEFORE ACTIVATION AND THERE HAD NOT BEEN ANY SMOKE OR FIRE TO SET IT OFF. UPON INVESTIGATION, IT WAS FOUND THAT A BATTERY BEING STORED ABOVE THE ALARM PANEL HAD BEEN ACCIDENTALLY DROPPED ONTO THE PANEL WHICH SET OFF THE SYSTEM. THREE OTHER ZONES OCCUPY THAT SYSTEM BUT DID NOT ACTIVATE AND WERE ABORTED.

JD 86020191600

1 FEBRUARY 1986 AT 0842 HOURS, A FIREPERSON ACTIVATED THE ABORT CONTROL SWITCH FOR THE HALON SYSTEM PROTECTING ROOM 200, DATA CONDITIONING ROOM (DCR), IN ASTF TEST BUILDING 912 TO FACILITATE PERSONNEL BRAZING WIRES TO COMPUTERS. UPON ACTIVATION OF THE ABORT CONTROL SWITCH AND WITH NO WARNING, THE FIRE EXTINGUISHING SYSTEM ACTIVATED DISCHARGING 520 POUNDS OF HALON 1301 IN ROOM 200. THE CAUSE OF THE INADVERTENT SYSTEM ACTIVATION IS UNDER INVESTIGATION.

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 JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE
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 SHORE FIRE MANAGEMENT REPORT
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RECORD ID: 86042691000 (CONTINUED) ***

FIRE PROTECTION CREWS, CONSISTING OF A P-8, P-10, P-13 AND CHIEF 2 RESPONDED TO BUILDING 90005 AT 2208 HOURS ON 26 APR 86. UPON RECEIPT OF A CODED ALARM, A COMPLETE CHECKOUT OF THE BUILDING WAS MADE BY FIRE PROTECTION PERSONNEL FINDING THAT THE HALON 1301 TOTAL FLOOD SYSTEM IN THE COMPUTER ROOM HAD ACTIVATED WITH THE COMPLETE DISCHARGE OF AGENT, ALTHOUGH CHECK OF COMPUTER ROOM REVEALED NO INDICATION OF FIRE OR SMOKE PRESENT. NO DAMAGE OCCURRED TO THE COMPUTER EQUIPMENT OR FACILITY BUT LOSS IN REPLACEMENT VALUE OF THE HALON 1301 AGENT HAS BEEN ESTABLISHED AT \$3328.00. A COMPLETE INSPECTION OF THE HALON SYSTEM WAS ACCOMPLISHED ON 28 APRIL TO DETERMINE THE CAUSE OF ACTIVATION. CLEANING OF ALL SMOKE DETECTORS WAS ACCOMPLISHED. THE ALARM MAINTENANCE PERSONNEL COULD NOT DETERMINE THE EXACT CAUSE OF ACTIVATION. THE COMPUTER EQUIPMENT WAS NOT IN OPERATION AT THE TIME OF THE INCIDENT AND NO PERSONNEL WERE IN THE FACILITY. THE LAST DATE THAT THE COMPUTERS WERE OPERATED WAS 25 APRIL 86 AT 1620 HOURS.

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RECORD ID: 86072090800 (CONTINUED) ***

ENGINE #1 AND ENGINE #2 VIA THE BLDG SECURITY FORCE RESPONDED TO A REPORTED HALON DUMP IN THE "VIABLE" COMPUTER ROOM AT BLDG #1. UPON ARRIVAL, AUDIBLE ALARMS INDICATING A "DUMP" WERE SOUNDING BUT NO ALARM WAS TRANSMITTED TO THE F.D. DISPATCH H. THE COMPUTER ROOM WAS NOT OCCUPIED AT THE TIME AND NO KEY WAS AUDIBLE. NO INDICATIONS OF FIRE WERE VISIBLE, SO FORCIB LE ENTRY WAS NOT USED. AN EMPLOYEE WAS TELEPHONED IN WITH THE KEY, BUT THE WAIT WAS FOR APPROXIMATELY 30 MINUTES. AFTER ENTERING THE ROOM, THE ALARM PANEL WAS FOUND IN "ALARM" AND THE HALON HAD DUMPED, DAMAGING CEILING TILES. A LOCAL ALARM COMPANY CONTRACTOR WAS CALLED INTO INVESTIGATE BECAUSE THERE WAS NO FIRE THAT WOULD HAVE ACTIVATED THE SYSTEM. THE CONTR ACTOR COULD FIND NO REASON WHY THE SYSTEM DUMPED BECAUSE FIREFIGHTERS HAD RESET THE ALARM PANEL PRIOR TO THE INVESTIGATI ON.

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PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 86090790100 (CONTINUED) ***

AT 0848 AN OCCUPANT FROM BUILDING 29808, COMPUTER ROOM, NOTIFIED THE FIRE DEPARTMENT DISPATCHER THAT THE AUTOMATIC FIRE ALARM SYSTEM HAD ACTIVATED. AT THE SAME TIME AN AUTOMATIC ALARM WAS RECEIVED FROM THE SAME BUILDING. THE ASSISTANT FIRE CHIEF AND TWO STRUCTURAL PUMPERS RESPONDED. UPON ARRIVAL, THE ASSISTANT FIRE CHIEF REPORTED THE HALON 1301 SYSTEM HAD OI SCHARGED. THE COMPUTER ROOM WAS SECURED. INVESTIGATION INDICATED THE MOST PROBABLE CAUSE OF THE HALON 1301 SYSTEM PREMAT URE DISCHARGE WAS A BAD CIRCUIT BOARD IN THE FIRE ALARM CONTROL PANEL. THE OCCUPANTS STATED ONLY ONE OF THE SMOKE DETECT ORS HAD ACTIVATED. THE SYSTEM WAS ABORTED AND APPROXIMATELY 30 SECONDS LATER THE SYSTEM DISCHARGED.

APPENDIX B INADVERTANT OPERATION OF HALON SYSTEMS NAVY SAFETY CENTER DATA, 1987

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RECORD ID: 87042991600 (CONTINUED) ***

AT 2345 AN AUTOMATIC FIRE ALARM WAS RECEIVED FROM BUILDING 29808. THE ASSISTANT FIRE CHIEF AND THREE STRUCTURAL PUMPS RESPONDED, WHILE ENROUTE TO BUILDING 29808 THE ALARM CENTER OPERATOR NOTIFIED THE ASSISTANT FIRE CHIEF THAT HALON 1301 FIRE SUPPRESSION SYSTEM IN ROOM 4 HAD DISCHARGED. UPON ARRIVAL, THE ASSISTANT FIRE CHIEF CONFIRMED THE HALON 1301 SYSTEM HAD DISCHARGED BUT NO FIRE. A PAPER SHREDDER LOCATED IN THE COMPUTER ROOM HAD OVERHEATED. INVESTIGATION INDICATED THE MOST PROBABLE CAUSE WAS THE PAPER SHREDDER OVERHEATED, SET OFF THE CROSS-ZONED SMOKE DETECTORS AND THE OCCUPANT FAILED TO ABORT THE FIRE SUPPRESSION SYSTEM. THE FIRE ALARM PANEL WAS IN THE NORMAL POSITION WHEN THE ASSISTANT FIRE CHIEF ARRIVED

ID 87081290400

AT 1959 RECEIVED CALL INDICATING HALON SYSTEM ACTIVATION IN MODULES ADJACENT TO BUILDING #972. RESPONDED WITH 1-1000 GPM PUMPER WITH FOUR MEN AND THEIR DISTRICT CHIEF. UPON ARRIVAL-FOUND ENTIRE HALON SYSTEM THROUGHOUT MODULES HAD ACTIVATED AND ALL PERSONNEL HAD EVACUATED AREA. NO FIRE. INVESTIGATION BY NAVAL ELECTRONICS SYSTEMS COMMAND, MD. WILL BE CONDUCTED FROM 17 THRU 21 AUGUST. EIGHT INTERCONNECTED TRAILER MODULES ADJACENT TO BUILDING #972 ARE CLASSIFIED AS A PART OF BUILDING #972. HOWEVER, ALARM AND EXTINGUISHING SYSTEM IN THE MODULES ARE NOT CONNECTED TO THE RADIO ALARM SYSTEM. RECOMMEND THAT THE SYSTEM BE TIED INTO THE RADIO ALARM SYSTEM.

Police Communications Center.

RECORD ID: 87063091200 (CONTINUED) ***

AT 0550 HOURS ON 30 JUNE 1987 THIS DEPARTMENT RECEIVED NOTIFICATION OF A FIRE ALARM AND ACTIVATION OF THE HALON SYSTEM IN BUILDING 5450/INFORMATION MANAGEMENT. 1-750 PUMPER W/4 PERSONNEL RESPONDED. UPON ARRIVAL CREWS WERE UNABLE TO ENTER THE COMPUTER ROOM IMMEDIATELY BECAUSE THE SECURITY COMBINATION LOCKS HAD BEEN CHANGED AND NEW COMBINATIONS HAD NOT BEEN PROVIDED. AT 0605 ACCESS WAS GAINED BY A COMPUTER OPERATOR WHO HAD BEEN SUMMONED BY THE FIRE DEPARTMENT. UPON ENTRY IT WAS OBSERVED THAT THE ALARM PANEL DISPLAY SHOWED SMOKE DETECTORS HAD BEEN ACTIVATED AND THE HALON UNITS HAD DISCHARGED. INVESTIGATION REVEALED THAT A BEARING IN THE HVAC UNIT(HEATING VENTILATION AIR CONDITIONING) HAD FAILED AND MELTED THE RUBBER HOUSING. SMOKE PRODUCED WAS DRAWN INTO THE COMPUTER ROOM AND ACTIVATED THE SMOKE DETECTORS AND HALON UNITS. WHEN THIS HAPPENED THE HVAC UNIT WAS AUTOMATICALLY SHUT DOWN WHICH PREVENTED AN ACTUAL FIRE IN THE HVAC SYSTEM. SYSTEM WAS RESET, HVAC REPAIRED AND HALON REFILLED. CREWS RETURNED AT 0630 HOURS.

RECORD ID: 87072190100 (CONTINUED) ***

RECEIVED AUTOMATIC ALARM FOR BLDG 1152. UPON ARRIVAL CREWS SEARCHED AREA, NO FIRE FOUND. WAS INFORMED BY A SERVICEMAN FOR B WILGRO CORP. MORRISON, PA., THAT WHILE WORKING ON AIR CONDITIONING UNIT A HIGH PRESSURE RELIEF VALVE DISCHARGED AND ACTIVATED 3 SOKE DETECTORS DISCHARGING THE HALON SYSTEM. CREWS VENTILATED THE AREA TO REMOVE THE REMAINING HALON GAS. ADDITIONAL DAMAGE TO THE WELDING RESULTED FROM 3 HALON DISCHARGE BRANCH LINES AND NOZZLES BENDING THEIR SUPPORTS, RAISING ABOVE THE CEILING WHILE DISCHARGING AGENT AND DAMAGING THE DROP CEILINGS AND BLOWING FIBERGLASS INSULATION THROUGHOUT THE COMPUTER ROOM.

Discharge line supports inadequate

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RECORD ID: 87100290200 (CONTINUED) ***

--- CASUALTY # 1 ---

CATGY: CIV SVC PERS TYPE: FIRE SEV: INJURY AGE: 50 TIME: 1806 SEX: F SVC/AFF: ARMY FAMLY W/STRUCT: OVER 1 YEAR
COND BEFORE INJ: AWAKE, UNIMPAIRED
ACTY AT TIME: NOT CLASSIFIED
NATURE OF INJ: COMPLAINT OF PAIN, INCL HEART ATTACK/STROKE
DISPOSITION: TAKEN TO HOSPITAL BY NON-FD VEHICLE

--- CASUALTY # 2 ---

CATGY: CIV SVC PERS TYPE: FIRE SEV: INJURY AGE: 38 TIME: 1806 SEX: M SVC/AFF: ARMY FAMLY W/STRUCT: OVER 1 YEAR
COND BEFORE INJ: AWAKE, UNIMPAIRED
ACTY AT TIME: NOT CLASSIFIED
NATURE OF INJ: COMPLAINT OF PAIN, INCL HEART ATTACK/STROKE
DISPOSITION: TREATED AT SCENE AND RELEASED

--- CASUALTY # 3 ---

CATGY: CIV SVC PERS TYPE: FIRE SEV: INJURY AGE: 52 TIME: 1806 SEX: F SVC/AFF: ARMY FAMLY W/STRUCT: OVER 1 YEAR
COND BEFORE INJ: AWAKE, UNIMPAIRED
ACTY AT TIME: NOT CLASSIFIED
NATURE OF INJ: COMPLAINT OF PAIN, INCL HEART ATTACK/STROKE
DISPOSITION: TREATED AT SCENE AND RELEASED

THE FBH FIRE DEPT RECEIVED A CALL FROM THE UNIVAC COMPUTER ROOM OF A HALON DUMP WITHOUT A FIRE, F.D. RESPONDED AND FOUND POST ELECTRICIANS AND OFF-POST FIRE ALARM CONTRACTORS ON THE SCENE. ALARM TECHS STATED THEY WERE TROUBLE SHOOTING A PROBLEM IN THE ALARM PANEL WHEN A WIRE WAS REMOVED AND THE SYSTEM DUMPED. THIS ACTION WAS COMPLETE SURPRISE BECAUSE THE WORKERS STATED THEY HAD THE ABORT SYSTEM ACTIVATED AS WELL AS THE SHUNT DEVICES. ALSO, THEY STATED THAT NO WARNING DEVICES, BELLS OR BUZZERS, ACTIVATED PRIOR TO THE HALON DUMP. ALL PRACTICALLY SAFETY PRECAUTIONS WERE TAKEN TO WORK ON THE SYSTEM AND YET IT STILL DUMPED. ALSO, NO ALARM SIGNAL WAS SENT TO THE FIRE DISPATCH CENTER. EMPLOYEES OF THE COMPUTER COMPLEX WERE WORKING IN THE AREA AT THE TIME OF THE DUMP AND 3 WHO WERE EXPOSED TO THE HALON 1301 WERE TREATED FOR COMPLICATIONS BY FIRE DEPT. RESCUE AND HOSPITAL PERSONNEL. ONE PERSON WAS TRANSPORTED FOR OBSERVATION AND TWO SIGNED SIGNATURE OF REL EASES.

3840 # Halon Dumped.

RECORD ID: 87111990400 (CONTINUED) ***

AT 1416, THE FIRE ALARM DISPATCHER RECIEVED A REPORT OF FIREALARM BILLS RINGING AT BUILDING 55350. IT WAS ALSO BELIEVED THAT THE HALON SYSTEM IN ROOM 163 HAD DISCHARGED. FIRE DEPARTMENT UNITS WERE DISPATCHED. UPON ARRIVAL, IT WAS VERIFIED THAT THE HALON SYSTEM HAD DISCHARGED. THE ROOM WAS LEFT SEALED FOR APPROXIMATELY TWENTY (20) MINUTES WHILE FIREFIGHTING CREWS LAID PRECONNECTED HAND LINES AND PREPARED TO MAKE ENTRY INTO THE ROOM. UPON ENTRY INTO ROOM 163, INVESTIGATION REVEALED THAT NO FIRE HAD OCCURRED, BUT AT LEAST FOUR (4) CROSS-ZONED IONIZATION SMOKE DETECTORS, LOCATED UNDER THE RAISED FLOOR, HAD BEEN ACTIVATED, AND HAD TRIPPED THE HALON TOTAL FLOODING SYSTEM. THE AREA UNDER THE FLOOR IS USED AS A RETURN AIR PLENUM AND IS REQUIRED TO BE PROTECTED BY SMOKE DETECTORS. FURTHER INVESTIGATION REVEALED THAT POST MAINTENANCE PERSONNEL WERE IN AN ADJACENT GAS ESCAPED FROM CYLINDERS WHILE MAINTENANCE WAS BEING PERFORMED, ENTERED THE AREA UNDER THE RAISED FLOOR, AND ACTIVATED THE SMOKE DETECTORS, TRIPPING THE HALON SYSTEM. THERE WAS NO PHYSICAL DAMAGE TO THE STRUCTURE OR CONTENTS OF THE ROOM. ELECTRONIC SYSTEMS WERE RESTORED TO NORMAL OPERATIONS APPROXIMATELY 1 HOUR AFTER INITIAL DISCHARGE.

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Computer Bm

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RECORD ID: 87013191200 (CONTINUED) ***

AT 0525 HOURS RECEIVED ALARM VIA ADMINISTRATIVE PHONE BY A SECURITY GUARD IN THE FACILITY STATING THAT THE FIRE ALARM CLAXON HORNS WERE SOUNDING ON THE SECOND FLOOR, FIRE CREWS RESPONDED, AND ON ARRIVAL, FOUND THE HALON 1301 TOTAL FLOODING SYSTEM DISCHARGED IN THREE ROOMS. INVESTIGATION TO DETERMINE CAUSE REVEALED THAT IN THE HALON MODULE CABINETS, WIRE #13 ON TERMINAL BOARD #2 WAS BROKEN INSIDE THE INSULATION, BUT WAS STILL MAKING CONTACT. THIS WIRE EVENTUALLY SEPARATED, CAUSING POWER TO THE (SR32) MODULE TO BE INTERRUPTED. THIS INTERRUPTION CAUSED A SET OF CONTACTS TO CLOSE ALLOWING CURRENT TO PASS THROUGH, ACTIVATING THE FIRING HEADS ON THE HALON CYLINDERS. DUE TO THE MALFUNCTION OCCURRING BETWEEN THE FIRING MECHANISM AND THE FIRE ALARM PANEL, NO SIGNAL WAS TRANSMITTED TO THE FIRE DEPARTMENT. NOTE: THE ROOM WAS UNOCCUPIED AT THE TIME OF DISCHARGE. TOTAL COST OF REPLISHING THE HALON (820LBS.) AND HYDOR STATIC TESTING OF CYLINDERS WAS \$7,899.00. TROUBLE SHOOTING, REMOVING CYLINDERS AND FIRE DEPARTMENT RESPONSE CONSUMED 39 MANHOURS, COSTING \$403.00. NO EQUIPMENT DAMAGE OCCURRED DURING THIS INCIDENT.

Electronic Bgypt: Rm

RECORD ID: 87032491500 (CONTINUED) ***

AT 0842 HOURS RECEIVED ALARM VIA CODED SIGNAL TO THE ALARM CENTER OF A HALON ACTIVATION IN FACILITY 392. ON ARRIVAL OF FIRE CREWS THE SYSTEM HAD INADVERTENTLY BEEN DISCHARGED BY CONTRACTOR MAINTENANCE PERSONNEL WORKING ON THE SYSTEM. INVESTIGATION REVEALED THAT MAINTENANCE PERSONNEL REMOVED A HOT LEAD WIRE CAUSING SEPARATION, THIS INTERRUPTED CURRENT TO THE HALON FIRING MODULES CAUSING IMMEDIATE DISCHARGE. THE AUDIBLE SOUND DEVICES WERE DISCONNECTED DURING THE MAINTENANCE AND DID NOT SOUND UNTIL THE AGENT DUMPED. A JANITOR WAS WORKING WITHIN 4 FEET OF A NOZZLE AND WAS INJURED DURING DISCHARGE OF THE AGENT, NO FIRE LOSS.

2876 # Halon 1301

RECORD ID: 87032791700 (CONTINUED) ***

ON 27 MARCH 87, THE BASE MAINTENANCE CONTRACT FIRE SUPPRESSION SYSTEM MAINTENANCE PERSONNEL DISCOVERED THAT THE HALON 1211 FIRE SUPPRESSION SYSTEM IN BUILDING 10032, FLAMMABLE LIQUID STORAGE FACILITY, HAD DISCHARGED. AN INVESTIGATION REVEALED THAT THE SYSTEM HAD DISCHARGED SOMETIME BETWEEN THE LAST SERVICE CHECK (12 FEB 87) AND THE 27TH OF MARCH 87. THE SYSTEMS MAINTENANCE PERSONNEL ALSO STATED THAT THE LOCAL ALARM HAD BEEN TURNED OFF. THE FIRE ALARM SYSTEM COULD NOT SEND A CODED SIGNAL TO THE CENTRAL RECEIVER BECAUSE THERE WAS NO PHONE LINE TO HOOK TO THE TRANSMITTER. THERE WAS NO DAMAGE TO THE FACILITY OR ITS CONTENTS. THERE WAS NO INDICATION AS TO THE CAUSE OF THE SYSTEM ACTIVATION. THE CONTRACTOR WHO INSTALLED THE SYSTEM WAS CONTACTED AND AN INVESTIGATION BY THE COMPANY REVEALED THAT THE SYSTEM HAD BEEN ACTIVATED BY THE INSTALLED FIXED TEMPERATURE HEAT DETECTORS. CORRECTIVE ACTION HAS BEEN TAKEN TO BRING THE SYSTEM UP TO STANDARDS REQUIRED IN AFR 88-15 AND THE NATIONAL FIRE CODES.

RECORD ID: 87041690900 (CONTINUED) ***

AT 2130 HOURS, RECEIVED AUTOMATIC ALARM ON BUILDING 1050, BASE HOSPITAL. UPON ARRIVAL, FIRE UNIT FOUND THE ANNUNCIATOR PANEL SHOWING TROUBLE IN ZONES 50 AND 62. FIREFIGHTERS FOUND THAT ZONE 50 HAD TWO PULL BOXES ACTIVATED AT THE TOP AND BOTTOM OF THE STAIRS. ZONE 62 WAS SHOWING TWO SMOKE DETECTORS ACTIVATED AND ONE OF THE TWO HALON BOTTLES IN THE CAT SCAN ROOM DISCHARGED. THE DOORS TO THE AREA WERE SECURED AT THE TIME OF THE HALON DISCHARGE. THE HALON SYSTEM WAS CHECKED BY ALARM MAINTENANCE PERSONNEL. NO REASON FOR ACTIVATION COULD BE FOUND. THE COST OF THE HALON REPLACEMENT IS \$996.00.

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RECORD ID: 87042090200 (CONTINUED) ***

RECEIVED A CALL VIA 2-2801, ADMINISTRATION PHONE, THAT THE FIRE ALARM IN BLDG. 8-140, WAS IN TROUBLE. R-6 RESPONDED TO R ESET TROUBLE ROUND. UPON ARRIVAL SYSTEM WAS IN TROUBLE, ALARM WAS SILENCED AND GENERATOR ROOM CHECKED FOR POSSIBLE CAUSE OF ALARM, NONE WAS FOUND. CREW THEN TRIED TO RESET THE SYSTEM. WHEN THE RESET BUTTON WAS PUSHED THE HALON SYSTEM ACTIVATED. THIS SYSTEM IS STILL UNDER WARRANTY AND THE CONTRACTOR WILL BE NOTIFIED. WE HAVE HAD PROBLEMS WITH THIS SYSTEM BEFORE, BUT THIS WAS THE FIRST TIME IT WAS ACTIVATED. COST OF HALON 1211 = \$2.47, HALON LOST, 250 POUNDS. TOTAL LOSS = \$617.50 (618.00) NOT DUE TO FIRE.

Radio-Radar Site

ID 87052890800

AT APPROXIMATELY 1430 HOURS ON 28 MAY 87, A POWER SURGE DISRUPTED ELECTRICAL OPERATION WITHIN THE HUSH HOUSE AND OTHER FACILITIES IN THE 318TH FIGHTER INTERCEPTOR SQUADRON (FIS) AREA. IN TRYING TO PUT THE ELECTRICAL EQUIPMENT IN-SERVICE, THE MANUAL DUMP SWITCH FOR THE HALON SYSTEM WAS ACCIDENTLY ACTIVATED. THE AIR FORCE LOSS SHOWN IS FOR 2,720 POUNDS OF HALON 1301 AT \$3.75 PER POUND AND \$480.00 SERVICE FEE CHARGE BY THE CONTRACTOR, TOTALING \$10,680.

Aircraft - Rocket - Repair

ID 87052890900

RESPONDED TO OX ALARM FOR BUILDING 13020. UPON ARRIVAL WE FOUND THAT THE HALON SYSTEM IN ROOM 326 HAD DISCHARGED. THREE SMOKE DETECTORS HAD BEEN ACTIVATED, HOWEVER NO CAUSE COULD BE FOUND. A THOROUGH SEARCH WAS CONDUCTED BY FIRE DEPARTMENT AND LAB SECURITY PERSONNEL.

General (Electronic) Resch. Lab.

RECORD ID: 87081591100 (CONTINUED) ***

AT 1154 ON 15 AUGUST 1987, AN AUTOMATIC CODED ALARM FROM BUILDING NO. 912, ASIF TEST ZONES 30, 73, 75, AND 77, WAS RECEIVED ON THE FIRE DEPARTMENT CENTRAL STATION RECEIVER. A FIRE RESPONSE WAS INITIATED AND ON ARRIVAL FOUND NO FIRE; HOWEVER, THE INSTALLED HALON SYSTEMS FOR ROOMS 118, 200, 201, 209, 211, 300, 307, AND 308 HAD ACTIVATED AND DISCHARGED. ELECTRICIANS WERE WORKING ON THE GENERAL FIRE ALARM ATTEMPTING TO CLEAR A TROUBLE SIGNAL. A CIRCUIT CARD, P/N 049111, WAS THOUGHT TO BE THE PROBLEM. A NEW CIRCUIT CARD, P/N 049111, WAS OBTAINED AND INSTALLED. WHEN THE TEST BUTTON WAS ACTIVATED, THE HALON SYSTEMS FOR ROOMS 118, 200, 201, 209, 211, 300, 307, AND 308 ACTIVATED AND DISCHARGED. THIS SHOULD NOT HAVE OCCURRED. A VISUAL COMPARISON OF THE OLD AND NEW CIRCUIT CARDS REVEALED THAT A WIRE ON THE ORIGINAL CARD HAD BEEN CUT AND BE NT BACK. THE NEW CIRCUIT CARD WAS REINSTALLED TO DUPLICATE OCCURRENCE AND IT DID DUPLICATE A HALON DISCHARGE. THE ORIGINAL PRINTED CIRCUIT CARD WAS INSTALLED AND IT DID NOT CAUSE A HALON DISCHARGE WHEN THE TEST BUTTON WAS ACTIVATED. IT IS BELIEVED THE ORIGINAL PRINTED CIRCUIT CARD WAS MODIFIED DURING ORIGINAL INSTALLATION AND THE MODIFICATION WAS NOT SHOWN ON THE AS-BUILT DRAWINGS. MEASURES TO PRECLUDE RECURRENCE ARE AS FOLLOWS: WHENEVER WORK IS TO BE ACCOMPLISHED ON ANY PART OF THE INSTALLED FIRE DETECTION/FIRE SUPPRESSION SYSTEM, THE FOLLOWING WILL BE ACCOMPLISHED: FIRE DEPARTMENT ISSUES SHUT-DOWN PERMIT ELECTRICIANS DISABLE ALL HALON ACTIVATING DEVICES DISABLE HALON INTERFACE WITH POWER AND AIR HANDLERS SERVING COMPUTERS DISABLE CO2 STORAGE TANKS.

3720 lbs of Halon

Aircraft Maintenance Facility

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RECORD ID: 87082692100 (CONTINUED) ***

AT 1556 HOURS THE COMMUNICATION CENTER RECEIVED AN ADMINISTRATIVE PHONE CALL FROM THE SECURITY SUPERVISORY OF FACILITY 7 000 WHO STATED THERE HAD BEEN AN INADVERTANT DISCHARGE OF THE HALON 1301 SYSTEM IN THE BASEMENT (ROOM B-1) OF THE FACILITY, CAUSED BY CONTRACTOR MAINTENANCE PERSONNEL WORKING ON THE SYSTEM. INVESTIGATION REVEALED MAINTENANCE PERSONNEL REMOVED A HOT LEAD WIRE FROM THE SYSTEM FIRE MODULE WITHOUT FIRST CLOSING THE HALON CYLINDER VALVES. THIS RESULTED IN THE IMMEDIATE DISCHARGE OF THE SYSTEM CONTROLLED BY THE MODULE. ALARM TRANSMITTING DEVICES WERE DISCONNECTED PRIOR TO MAINTENANCE, PREVENTING AUTOMATIC NOTIFICATION OF THE FIRE DEPARTMENT COMMUNICATION CENTER. *Communications Facility*

Dumped 2479 # of Halon

RECORD ID: 87111891800 (CONTINUED) ***

AT 2215 RECEIVED NOTIFICATION A WORKER INVESTIGATING AN EQUIPMENT ALARM IN THE TELEPHONE SWITCH ROOM, ENTERED THE AREA TO NOTIFY BRITISH TELECOM (BT) PRIOR TO ENTRY HE INADVERTENTLY ACTIVATED THE SYSTEM BY USING THE WRONG KEY. THERE ARE TWO KEYS, ONE THAT WILL MANUALLY DISCHARGE THE SYSTEM THE OTHER WHICH CHANGES THE OPERATION MODE FROM MANUAL TO AUTOMATIC. IN ADDITION HE WAS UNDER THE IMPRESSION THE HALON SYSTEM MUST BE KEYED FROM AUTO TO MANUAL MODE WHILE OCCUPIED. ONLY DURING PERIODS WHEN THE ROOM IS OCCUPIED BY BT PERSONNEL WILL THE SYSTEM BE PLACED IN THE MANUAL MODE USING THE KEY KEPT IN THE COMM CENTER. INDIVIDUAL WAS NOT THOROUGHLY FAMILIAR WITH THE KEY PROCEDURES, EVEN THOUGH HE RECEIVED TRAINING ON 19 AUG 87. NOTE: COST TO RESERVE UNIT WAS \$2185.00. HALON SYSTEM WAS BACK IN SERVICE 2229 HRS ON THE 19 NOV 87. ALL COMM CENTER PERSONNEL RECEIVED REFRESHER TRAINING.

Telephone Exchange

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RECORD ID: 87122890300 (CONTINUED) ***

ON 28 DEC 87 AT 2026 HRS THE FIRE ALARM CENTER RECEIVED A COMPUTER PRINTOUT OF FIRE FROM BLDG 1182 HOSPITAL MECHANICAL ROOM. UPON ARRIVAL AT 2032 THE R-5 CREW INSPECTED THE MECHANICAL ROOM AND FOUND NO SIGNS OF FIRE. THE P-7 CREW AT 2036 ADVISED OF THE MAIN FIRE ALARM PANEL INDICATED TROUBLE IN ZONE 1. (MECHANICAL ROOM) AT 2047 R-5 ADVISED THAT THE HALON SYSTEM PANEL INDICATED A PULLED PULL STATION, NONE WERE FOUND, THE SYSTEM WAS ABORTED AND RESET ACCOMPLISHED. AT 2052 CH-1 DECLARED THE BUILDING FIRE SAFE AND TERMINATED THE EMERGENCY. EMCS WERE NOTIFIED AND UPON THERE ARRIVAL ATTEMPTED TO TROUBLESHOOT THE SYSTEM. WHILE IN THE MECHANICAL ROOM CHECKING THE SYSTEMS DETECTORS, THE HALON SYSTEM ACTIVATED AT 2108. CAUSE OF ACTIVATION: THE EMCS SHOP FOREMAN DETERMINED THAT RAIN WATER ENTERED ELECTRICAL CONDUIT WHICH GOES INTO THE HALON SYSTEM PANEL. THIS SHORTED THE PANEL CAUSING THE HALON SYSTEM TO ACTIVATE. COST TO REPLACE THE HALON IS \$7.00 A POUND FOR 346 LBS, \$2422.00. EMCS PERSONNEL ADVISED THE SYSTEM WOULD BE TESTED AFTER IT DRIES OUT TO CHECK FOR FURTHER DAMAGE.

2478
Hospital Mechanical Room

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 PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 87082692100 (CONTINUED) ***

AT 1556 HOURS THE COMMUNICATION CENTER RECEIVED AN ADMINISTRATIVE PHONE CALL FROM THE SECURITY SUPERVISORY OF FACILITY 7000 WHO STATED THERE HAD BEEN AN INADVERTANT DISCHARGE OF THE HALON 1301 SYSTEM IN THE BASEMENT (ROOM B-1) OF THE FACILITY, CAUSED BY CONTRACTOR MAINTENANCE PERSONNEL WORKING ON THE SYSTEM. INVESTIGATION REVEALED MAINTENANCE PERSONNEL REMOVED A HOT LEAD WIRE FROM THE SYSTEM FIRE MODULE WITHOUT FIRST CLOSING THE HALON CYLINDER VALVES. THIS RESULTED IN THE IMMEDIATE DISCHARGE OF THE SYSTEM CONTROLLED BY THE MODULE. ALARM TRANSMITTING DEVICES WERE DISCONNECTED PRIOR TO MAINTENANCE, PREVENTING AUTOMATIC NOTIFICATION OF THE FIRE DEPARTMENT COMMUNICATION CENTER. *Communications Facility*

Dumped 2479 # of Halon

RECORD ID: 87111891800 (CONTINUED) ***

AT 2215 RECEIVED NOTIFICATION A WORKER INVESTIGATING AN EQUIPMENT ALARM IN THE TELEPHONE SWITCH ROOM, ENTERED THE AREA TO NOTIFY BRITISH TELECOM (BT) PRIOR TO ENTRY HE INADVERTENTLY ACTIVATED THE SYSTEM BY USING THE WRONG KEY. THERE ARE TWO KEYS, ONE THAT WILL MANUALLY DISCHARGE THE SYSTEM THE OTHER WHICH CHANGES THE OPERATION MODE FROM MANUAL TO AUTOMATIC. IN ADDITION HE WAS UNDER THE IMPRESSION THE HALON SYSTEM MUST BE KEYS FROM AUTO TO MANUAL MODE WHILE OCCUPIED. ONLY DURING PERIODS WHEN THE ROOM IS OCCUPIED BY BT PERSONNEL WILL THE SYSTEM BE PLACED IN THE MANUAL MODE USING THE KEY KEPT IN THE COMM CENTER. INDIVIDUAL WAS NOT THOROUGHLY FAMILIAR WITH THE KEY PROCEDURES, EVEN THOUGH HE RECEIVED TRAINING ON 19 AUG 87. NOTE: COST TO RESERVICE UNIT WAS \$2185.00. HALON SYSTEM WAS BACK IN SERVICE 2229 HRS ON THE 19 NOV 87. ALL COMM CENTER PERSONNEL RECEIVED REFRESHER TRAINING.

Telephone Exchange

FOR OFFICIAL USE ONLY
 JOB NUMBER: R0511EA
 JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE
 TIME FRAME: JAN 87 THRU DEC 87
 PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

SHORE FIRE MANAGEMENT REPORT

22 JAN 91

RECORD ID: 87122890300 (CONTINUED) ***

ON 28 DEC 87 AT 2026 HRS THE FIRE ALARM CENTER RECEIVED A COMPUTER PRINTOUT OF FIRE FROM BLDG 1182 HOSPITAL MECHANICAL ROOM. UPON ARRIVAL AT 2032 THE R-5 CREW INSPECTED THE MECHANICAL ROOM AND FOUND NO SIGNS OF FIRE. THE P-7 CREW AT 2036 ADVISED THE MAIN FIRE ALARM PANEL INDICATED TROUBLE IN ZONE 1. (MECHANICAL ROOM) AT 2047 R-5 ADVISED THAT THE HALON SYSTEM PANEL INDICATED A PULLED PULL STATION, NONE WERE FOUND, THE SYSTEM WAS ABORTED AND RESET ACCOMPLISHED. AT 2052 CH-1 DECLARED THE BUILDING FIRE SAFE AND TERMINATED THE EMERGENCY. EMCS WERE NOTIFIED AND UPON THERE ARRIVAL ATTEMPTED TO TROUBLESHOOT THE SYSTEM, WHILE IN THE MECHANICAL ROOM CHECKING THE SYSTEMS DETECTORS, THE HALON SYSTEM ACTIVATED AT 2108. CAUSE OF ACTIVATION: THE EMCS SHOP FOREMAN DETERMINED THAT RAIN WATER ENTERED ELECTRICAL CONDUIT WHICH GOES INTO THE HALON SYSTEM PANEL, THIS SHORTED THE PANEL CAUSING THE HALON SYSTEM TO ACTIVATE. COST TO REPLACE THE HALON IS \$7.00 A POUND FOR OR 346 LBS, \$2422.00. EMCS PERSONNEL ADVISED THE SYSTEM WOULD BE TESTED AFTER IT DRIES OUT TO CHECK FOR FURTHER DAMAGE.

Hospital Mechanical Room.

APPENDIX B INADVERTANT OPERATION OF HALON SYSTEMS NAVY SAFETY CENTER DATA, 1988

PAGE: 52

22 JAN 91

SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 88 THRU DEC 88

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 88122690400 (CONTINUED) ***

RESPONDED TO AN ALARM AT BUILDING A-100 COMPUTER ROOM. THE HALON SYSTEM HAD ACTIVATED AND DUMPED ONE 315 POUND CYLINDER OF HALON. THERE WAS NO APPARENT FIRE OR REASON FOR THE ACTIVATION. THERE WAS NO KNOWN PROPERTY DAMAGE. MR. SAM RODGERS OF DATA PROCESSING WAS NOTIFIED AND HE SAID THE MAIN AIR CONDITIONING (A/C) COULD REMAIN OFF A FEW HOURS AS THE COMPUTERS WERE POWERED-DOWN. THE MAIN A/C UNIT IS INTERCONNECTED WITH THE HALON SYSTEM SO IT IS SHUT DOWN WHEN THE HALON SYSTEM ACTIVATES. WE DID NOT WANT TO RESET THE SYSTEM UNTIL A REPRESENTATIVE OF FIRE CONTROL, INC. COULD CHECK FOR THE CAUSE OF THE ACTIVATION. LAMAR FLEMING OF FIRE CONTROL WAS CONTACTED AT 0700 HRS. HE ARRIVED ABOUT 0830 HRS., RESET THE HALON CONTROL PANEL TO ALLOW THE A/C UNIT TO RUN, REMOVED THE EMPTY CYLINDER, AND STATED HE WOULD RETURN, WHEN HIS TECHNICIAN WAS AVAILABLE. THE RESERVE CYLINDER WAS NOT SWITCHED ON BECAUSE THE PROBLEM HAD NOT BEEN FOUND. THE DETECTION AND ALARM FEATURES WERE OPERATIVE. FIRE CONTROL, INC. RETURNED ON 29 DEC., REPLACED THE CYLINDER AND CHECKED OUT THE DETECTION SYSTEM. NO PROBLEM WAS FOUND. A POSSIBLE CAUSE IS THE NEW ADDITIONAL A/C UNIT WHICH WAS PUT IN SERVICE 19 DEC. THE UNIT HAS A RE-HEAT CYCLE THAT, BECAUSE OF BEING NEW, MAY HAVE PRODUCED FUMES AND ACTIVATED THE SMOKE DETECTORS. ON 3 JAN. 1989, M.T.I. AIR CONDITIONING PERSONNEL CHECKED OUT THE NEW UNIT AND COULD NOT FIND ANYTHING WRONG. OTHER POSSIBLE CONTRIBUTING FACTORS ARE THE HIGH HUMIDITY THAT EXISTED FOR SEVERAL DAYS PRIOR TO ACTIVATION AND DETECTORS THAT MAY BE SET TOO SENSITIVE. THE HIGH HUMIDITY WAS CAUSED BY THE FAILURE OF THE DEHUMIDIFIER ON THE MAIN AIR CONDITIONING UNIT. THE EXACT CAUSE HAS NOT BEEN DETERMINED.

STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE	PROPERTY	TOTAL	INJ	DEATHS
VALUE: NOT REPTD	\$0	\$0			\$0	0	0
LOSS: \$400,000	\$0	\$400,000			\$0		

ID 88061090100

AT 22114, FD RESPONDED BUILDING 372 ENGINE TEST CELL. UPON ARRIVAL FD FOUND THAT THERE WAS A FIRE IN A JET ENGINE IN TEST CELL #14 WHICH HAD BEEN EXTINGUISHED BY HALON & CO2 FIXED SYSTEMS. AT THIS TIME ESTIMATED VALUE LOSS AND CAUSE ARE BEING INVESTIGATED.

Alircraft Repair Facility
Hicken (400#)
CO2 (300#)

----- GOVERNMENT PROPERTY DAMAGE LOSSES ----- NON GOVERNMENT PROPERTY DAMAGE LOSSES ----- NUMBER OF

INJ DEATHS

STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE	PROPERTY	TOTAL	INJ	DEATHS
VALUE: \$0	\$60,000	\$60,000			\$0	0	0
LOSS: \$0	\$60,000	\$60,000			\$0		

ID 88031390400

AT 0438 AUTOMATED ALARM WAS RECEIVED FROM BUILDING 230, ADP COMPUTER AREA HALON PANEL. ENG #7 RESPONDED AND ARRIVED ON SCENE TO FIND HALON HAD DUMPED, NO FIRE OR SMOKE EXISTED IN AREA. SUPERVISOR ON DUTY HAD HIT RESET BUTTON PRIOR TO FIRE DETECT ARRIVAL. AS A RESULT CAUSE COULD NOT BE DETERMINED POSSIBLE CAUSE OF SYSTEM DISCHARGE 1. MECHANICAL MALFUNCTION 2. PERSONNEL SMOKING 3. MANUALLY ERROR 4. IMPROPER PROCEDURE 5. PERSONNEL PANICKED. AT THIS PRESENT TIME SYSTEM IS IN AUTOMATIC AND BEING SUPERVISED.

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----			NON GOVERNMENT PROPERTY DAMAGE LOSSES -----			NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TOTAL	TYPE PROPERTY	INJ	DEATHS	
VALUE: \$0	\$43,331	\$43,331	\$0		0	0	
LOSS: \$0	\$43,331	\$43,331	\$0				

DD 88090570100

AT 0755 HRS, FIRE DEPT RECEIVED A CALL ON 46021 TELLING US THAT THE HALON SYSTEM HAD DUMPED. CREW WAS SENT TO ADP COMPUT ER ROOM TO CHECK ON HALON STATUS AND REPORTED SYSTEM HAD DISCHARGED. NO ALARMS WERE RECORDED AT FIRE DEPT BUT A TROUBLE ALARM WAS RECEIVED IN SECURITY POLICE OFFICE AT 0407. AT THIS TIME CAUSE OF MALFUNCTION CANNOT BE DETERMINED. HALONE SYS TEM IS BACK IN OPERATION AND IN THE MANUAL MODE AND BEING SUPERVISED.

Army Computer Rm. (Data Processing Center)

FOR OFFICIAL USE ONLY
 JOB NUMBER: R0511EA
 JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE
 TIME FRAME: JAN 88 THRU DEC 88
 PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

SHORE FIRE MANAGEMENT REPORT
 22 JAN 91
 PAGE: 57

RECORD ID: 88011390500 (CONTINUED) ***

RECEIVED CODE, 4RD, BLDG 542. CH-1, R-6, A-1, E-8 RESPONDED LAND LINE NOTIFICATION OF HALON DUMP. UPON ARRIVAL FOUND HAL ON DUMP IN P.A. ROOM AND RM 101 OF THE FACILITY. TWO SMOKE DETECTORS ACTIVATED IN ROOM 101, BOTH IN THE EAST END. NO APP ARENT CAUSE FOR DUMP. AREA WAS SECURE ON ARRIVAL. 1400 LBS OF HALON WAS DUMPED.

Radiac/Radar site

FOR OFFICIAL USE ONLY
 JOB NUMBER: R0511EA
 JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE
 TIME FRAME: JAN 88 THRU DEC 88
 PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

SHORE FIRE MANAGEMENT REPORT
 22 JAN 91
 PAGE: 69

RECORD ID: 88022890500 (CONTINUED) ***

ON 28 FEB 88, 2240 HOURS, THE BASE FIRE DEPARTMENT WAS NOTIFIED VIA 256-5130 AND NOTIFIER SYSTEM IN THE ALARM ROOM THAT THE ALARM SYSTEM IN BUILDING 50 ACTIVATED. UPON ARRIVAL OF FIRE DEPARTMENT PERSONNEL, IT WAS NOTED THAT THE HALON SYSTEM HAD BEEN DISCHARGED. (NO FIRE) FIRE DEPARTMENT PERSONNEL VENTILATED THE BUILDING. CAUSE: THE OCCUPANTS OF THE BUILDING STATED THE ALARM BELLS WERE RINGING AND RAN OVER TO HIT THE ABORT SWITCH AND ACCIDENTALLY HIT THE MANUAL DUMP SWITCH CAU SING THE SYSTEM TO ACTIVATE. NO DAMAGE TO THE FACILITY. NOTE: CIVIL ENGINEERING CRAFTSMAN COULD NOT DETERMINE WHY THE AL ARM BELLS WERE RINGING PRIOR TO SYSTEM ACTIVATION. AIR FORCE LOSS: APPROXIMATELY \$13,000.

Computer - data Processing Center

SHORE FIRE MANAGEMENT REPORT

22 JAN 91

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA
JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE
TIME FRAME: JAN 88 THRU DEC 88
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 88061691000 (CONTINUED) ***

F D RCVD CALL VIA 117 HALON DUMP, NO FIRE, BLDG 598. CHIEF 1, ENG 8, RESCUE 6 RESPONDED. THE MAIN COMMUNICATIONS RM HALON TOTAL FLOOD SYSTEM HAD ACTIVATED. PULL STATIONS WERE FOUND IN TACT. THE ALARM PANEL SHOWED TROUBLE INDICATION IN ZONE 5 WHICH COVERED A PULL STATION. ALSO FOUND IN TACT. PERSONNEL DID NOT RECEIVE ADVANCE WARNING OF IMPENDING HALON DUMP. BASE INSTRUMENT SHOP WAS CALLED TO DOUBLE CHECK. FINDINGS SAME AS FIRE PER ELLS AND TOTAL FLOOD OPERATED SIMULTANEOUSLY. SONNEL. POWER PRODUCTION PERSONNEL WERE CONDUCTING MONTHLY EMERGENCY GENERATOR CHECK, INCLUDED RUNNING THE GENERATOR ENGINE. ON COMPLETION PREPARED TO RETURN TO COMMERCIAL POWER. BREAKER #21 (A-BUSS) OPENED AND WOULD NOT CLOSE. THE ENTIRE FACILITY TRANSFERRED TO BACKUP BATTERY POWER. TRIED TO TRANSFER POWER TO BREAKER #24 (B-BUSS) BUT ALSO WOULD NOT CLOSE. WHILE E ATTEMPTED TO RESET A OR B CIRCUIT, THEY HEARD BELLS AND HALON SYSTEM DUMPED. MOST PROBABLE CAUSE IS THE EMERGENCY GENERATOR AND POWER CHANGE OVER EQUIPMENT POSSIBLY SET UP A GROUND CONDITION IN THE ALARM PANEL CAUSING THE SYSTEM TO ACTIVATE. THIS IS THE SECOND ACTIVATION OF UNKNOWN CAUSE. PORTIONS OF SYSTEM ARE TO BE REROUTED AND REWIRED IN EFFORT TO PREVENT FURTHER ACTIVATIONS.

Radial Radar Site

SHORE FIRE MANAGEMENT REPORT

22 JAN 91

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JOB NUMBER: R0511EA
JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE
TIME FRAME: JAN 88 THRU DEC 88
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 88060791100 (CONTINUED) ***

1248 HRS, FIRE ALARM COMM CENTER RECEIVED A CALL ON 117 REPORTING HALON DISCHARGE IN VKF COMPUTER ROOM, BLDG 676. INVESTIGATION REVEALED THAT CALSPAN ELECTRICIANS, WERE PULLING CABLE UNDER THE COMPUTER ROOM FLOOR RESULTED IN ACTIVATION OF TWO DETECTORS IN TWO SEPARATE ZONES. CALSPAN COMPUTER ROOM PERSONNEL FAILED TO FOLLOW PROCEDURES BY REQUESTING FIRE DEPT. WENT TO SHUT DOWN THE HALON SYSTEM PRIOR TO MAINTENANCE. WAS NO PRE-ALARM PRIOR TO DISCHARGE F D DID NOT RECEIVE A CODED ALARM FROM BLDG 676. CHECKOUT REVEALED THE ALARM CIRCUIT RELAY HAD SHORTED OUT. DELAY IN F D RESPONSE WAS A RESULT OF COMM OP FAILING TO IMMEDIATELY DISPATCH EQUIPMENT. CALSPAN MANAGEMENT MUST ENSURE THAT TRAINING IS CONDUCTED IN ACCORDANCE WITH AFOSH 127-58, PARA 4.2.7. F A OP HAS BEEN DISCIPLINED FOR FAILURE TO FOLLOW PROCEDURES. OTHER OPS WILL RECEIVE ADDITIONAL TRAINING IN DISPATCH PROCEDURES.

INJ DEATHS

TYPE PROPERTY

STRUCTURE/MOBILE	CONTENTS	TOTAL	TOTAL
VALUE: \$3,485	\$0	\$3,485	\$0
LOSS: \$3,485	\$0	\$3,485	\$0

FD-502-2476-002

AT 0925, RECEIVED ADMINISTRATIVE TELEPHONE CALL (EXT 2603) FROM BCE SYSTEMS CONTROL SHOP, THERE WAS AN ACCIDENTAL ACTIVATION OF THE HALON SYSTEM IN BUILDING 853. THE SYSTEM HAD DISCHARGED ONE 410 POUND CYLINDER OF HALON 1301. AIR FORCE LOSS : \$3,485.00 ESTIMATED AT \$8.50 PER POUND.

Electric Generating Plant

SHORE FIRE MANAGEMENT REPORT

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JOB NUMBER: R0511EA

PAGE: 93

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

22 JAN 91

TIME FRAME: JAN 88 THRU DEC 88

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 88071291600 (CONTINUED) ***

AT 0943 HOURS ON 12 JUL 88, THE ALARM ROOM OPERATOR RECEIVED A COMPUTER PRINT OUT OF FIRE FROM BUILDING 175. ON ARRIVAL, THE ASSISTANT FIRE CHIEF WAS ADVISED THAT THERE WAS NO FIRE, HOWEVER, HALON WAS DISCHARGING IN ROOM 139, THE B-52 FLIGHT SIMULATOR. AN INVESTIGATION REVEALED THAT THE ACTIVATION WAS CAUSED WHEN AIRMAN WAS ENTERING THE SIMULATOR FOR TRAINING AND TRIPPED, REARED BACK, AND ACCIDENTLY BUMPED INTO THE MANUAL DUMP SWITCH WHICH WAS LOCATED JUST INSIDE THE ENTRANCE. TWO CYLINDERS OF HALON (392 LBS) WERE DISCHARGED. THE COST FOR REPLACING THE AGENT IS \$3,136.

Flight Simulator

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

SHORE FIRE MANAGEMENT REPORT

PAGE: 91

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

22 JAN 91

TIME FRAME: JAN 88 THRU DEC 88

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 88061890200 (CONTINUED) ***

RECEIVED THREE FALSE ALARMS FROM BLDG. 639, BASE SUPPLY. CHIEF 2, RESCUE, PUMPER RESPONDED. NO REASON FOR ALARM TRANSMITTAL WAS FOUND. WHILE STILL IN THE IMMEDIATE AREA OF THE COMPUTER ROOM, THE 1301 HALON SYSTEM DISCHARGED WITH NO PRIOR WARNING FROM THE ALARM BELLS OR LIGHTS. UPON INVESTIGATION BY ALARM MAINTENANCE A FAULTY DETECTOR WAS FOUND, HOWEVER, THE CAUSE OF THE HALON DISCHARGE IS STILL NOT KNOWN. NO DAMAGE TO COMPUTERS. LOSS WAS LIMITED TO COST OF AGENT REPLACEMENT.

"Military Store"

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JOB NUMBER: R0511EA

SHORE FIRE MANAGEMENT REPORT

PAGE: 89

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

22 JAN 91

TIME FRAME: JAN 88 THRU DEC 88

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 88061691600 (CONTINUED) ***

AUTOMATIC ALARM RECEIVED AT 0944 FROM BUILDING 34705, TEST GROUP SUPPORT FACILITY, INDICATING ACTIVATION OF HALON SYSTEM. UPON ARRIVAL OF ASSISTANT CHIEF, P-20, AND A P-12 PUMPER, HALON OPERATION WAS CONFIRMED WITH NO EVIDENCE OF FIRE. INVESTIGATION REVEALED A CONTRACTOR WAS CUTTING A CONCRETE WALL WITH A MASONRY SAW CAUSING ENOUGH DUST TO ACTIVATE TWO DETECTORS. FIRE PREVENTION BRIEFED FACILITY CUSTODIAN AND EMPHASIS OF THIS INCIDENT WILL BE COVERED DURING ALL PRE-CONTRACTOR BRIEFINGS.

*Computer/Data Processing Center**-53-*

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----		NON GOVERNMENT PROPERTY DAMAGE LOSSES -----		NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE PROPERTY	TOTAL	INJ DEATHS
VALUE: \$3,518,129	\$15,000,000	\$18,518,129	\$0	0	0
LOSS: \$0	\$7,000	\$7,000			

ID 8813041300
 RECEIVED CALL VIA FIREPHONE 117 OF HALON SYSTEM DUMP AT BLDG 1907, SECOND FLOOR, COMPUTER ROOM. UPON ARRIVAL, FOUND THAT THE SYSTEM HAD COMPLETELY DUMPED 641 POUNDS OF HALON 1301. CIVIL ENGINEERING ELECTRICAL CRAFTSMEN WERE WORKING ON THE HALON ALONE FIRE ALARM PANEL WHEN IT ACTIVATED, DUMPING IN THE COMPUTER ROOM. SEVERAL CEILING TILES WERE DISPLACED BY THE HALON. NO OTHER DAMAGE NOTED AT THIS TIME.

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----		NON GOVERNMENT PROPERTY DAMAGE LOSSES -----		NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE PROPERTY	TOTAL	INJ DEATHS
VALUE: \$8,290,000	\$1,000,000	\$9,290,000	\$0	0	0
LOSS: \$0	\$4,684	\$4,684			

ID 88103096800
 SAC ELITE GUARD REPORTED ALARMS SOUNDING IN BJ WING. UPON ARRIVAL OF CHIEF-1, RESCUE-6, ENGINE-8, AND AERIAL-1, IT WAS DETERMINED THAT AREA AFFECTED WAS BB30 VAULT. UPON ENTRY, THE AREA WAS FULL OF STEAM FROM A BROKEN STEAM LINE UNDER THE FLOOR. STEAM ACTIVATED THE HALON SYSTEM IN BB30H ROOM. ALL OTHER SYSTEMS IN BB30 VAULT WERE NOT AFFECTED. APPROXIMATELY 39 POUNDS OF HALON WERE DUMPED. SYSTEM FUNCTIONED PROPERLY.

Computer / Data Processing Center

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----		NON GOVERNMENT PROPERTY DAMAGE LOSSES -----		NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE PROPERTY	TOTAL	INJ DEATHS
VALUE: \$215,000	\$2,264	\$217,264	\$0	0	0
LOSS: \$0	\$2,264	\$2,264			

ID 8809410400

ON 18 SEP 88, 1517 HOURS, RECEIVED ALARM FROM BUILDING 1528. UPON ARRIVAL, FOUND THAT THE HALON SYSTEM HAD GONE OFF. INV ESTIGATIONS REVEALED THAT A MALFUNCTION IN THE DETECTION SYSTEM ACTIVATED THE TWO SYSTEMS IN THE COMPUTER ROOM SECTION OF THE BUILDING. ONE BOTTLE CONTAINED 250 LBS., THE OTHER 33 LBS. THE INDIVIDUAL WORKING IN THE BUILDING STATED THE SYSTEM WENT OFF FOR NO APPARENT REASON. ESTIMATED AF LOSS: \$2,240 AT \$8.00 PER LB.

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----		NON GOVERNMENT PROPERTY DAMAGE LOSSES -----		NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE PROPERTY	TOTAL	INJ DEATHS
VALUE: \$99,999,999	\$33,000,000	\$132,999,999	\$0	0	0
LOSS: \$2,500	\$0	\$2,500			

ID 88082290500

AT 1330 HOURS, RECEIVED AUTOMATIC ALARM ON BUILDING 1535, HQ AFSC COMPUTER ROOM. UPON ARRIVAL OF FIRE UNITS, FOUND THE ALARM PANEL SHOWING TROUBLE IN ZONE 3. FIREFIGHTERS FOUND THAT THE HALON BOTTLE IN THE STORAGE ROOM FOR COMPUTER TAPES HAD ACTIVATED. CAUSE OF ACTIVATION WAS SAWDUST FROM CARPENTERS USING A CIRCULAR SAW TO CUT A WOODEN FLOOR. FIRE LOSS WAS COST OF RESERVICING HALON SYSTEM. ESTIMATED DOLLAR VALUE OF STRUCTURE IS \$102,197,000.

SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 88 THRU DEC 88

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

22 JAN 91

RECORD ID: 88121991600 (CONTINUED) ***

AT 1700L, THE FIRE DEPARTMENT COMMUNICATIONS CENTER RECEIVED A FIRE ALARM SIGNAL FROM BUILDING 714; EQUIPMENT RESPONSE NOT REQUIRED AS FIRE FIGHTERS WERE ALREADY ON SCENE. INVESTIGATION REVEALED THAT FIRE FIGHTERS WERE PERFORMING A CONTINUITY CHECK OF THE SOUTH WING HALON 1301 TOTAL FLOOD SYSTEM. DURING THE OPERATIONAL CHECK, TWO ZONES WERE INADVERTENTLY ACTIVATED RESULTING IN DISCHARGE OF 286 LBS OF HALON. PROCEDURES BEING UPDATED TO INCLUDE DISENGAGEMENT OF INTERLOCK SWITCHES PRIOR TO TEST. IN ADDITION, ACTION TAKEN TO INSTALL A REMOTE ABORT SWITCH AT THE MAIN CONTROL PANEL.

Business Office

SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 88 THRU DEC 88

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

22 JAN 91

RECORD ID: 88121390700 (CONTINUED) ***

ON 13 DEC 88, AT 1855, THE FIRE DEPARTMENT ALARM ROOM RECEIVED AN AUTOMATIC ALARM FROM ZONE 4, BLDG 58, DATA PROCESSING CENTER. THE ASSISTANT CHIEF ALONG WITH THE P-10, P-8, AND P-20 RESPONDED. UPON ARRIVAL, THE CREW CHIEF OF THE P-10 MET WITH THE OCCUPANT AND WAS TOLD THAT TWO HALON 1301 SYSTEMS HAD ACTIVATED. ONE IN THE COMPUTER ROOM AND THE OTHER IN THE TAPE LIBRARY. AS THE CREW MADE ENTRY A THIRD SYSTEM ACTIVATED IN THE STORAGE ROOM. NO FIRE WAS INVOLVED. THE CONTROL SHOP WAS NOTIFIED AND UPON ARRIVAL, BRIEFED BY THE ASSISTANT CHIEF. INVESTIGATION OF THE INCIDENT COULD NOT DETERMINE THE CAUSE OF THE ACTIVATION. THE SEQUENCE OF EVENTS ARE AS FOLLOWS: THE ON-DUTY COMPUTER OPERATOR HEARD THE ACTIVATION WARNING HORN AND NOT SEEING ANY SMOKE OR FIRE, PUSHED THE ABORT SWITCH FOR THE SYSTEM. AS HE DID THIS THE SYSTEM IN THE TAPE LIBRARY DISCHARGED. UPON HEARING THE SYSTEM DUMP, THE OPERATOR RELEASED THE ABORT SWITCH IN ORDER TO INVESTIGATE. WHILE DOING SO THE SYSTEM IN THE COMPUTER ROOM DISCHARGED. AS THE FIRE DEPARTMENT ENTERED A THIRD SYSTEM IN THE SUPPLY ROOM DISCHARGED. THE CONTROL SHOP THOROUGHLY CHECKED AND TESTED ALL DETECTORS AND ASSOCIATED EQUIPMENT. ALL ITEMS WERE FOUND TO BE OPERATING PROPERLY; HOWEVER, PRIOR TO REARMING THE SYSTEM THEY WILL ENSURE THE INTEGRITY OF THE SYSTEM TO PREVENT FURTHER INADVERTENT DISCHARGES. IF ANY PROBLEMS ARE FOUND THEY WILL BE CORRECTED.

FIGURE B
INADVERTANT ACTUATION OF HALON SYSTEMS
NAVY SAFETY CENTER DATA, 1989

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22 JAN 91

SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 89 THRU DEC 89

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 89080390200 (CONTINUED) ***

AT 1236 NESCOM RECEIVED FIRE ALARM FOR BUILDING 467, NAVAL SUPPLY CENTER. ALL FIRE DEPARTMENT UNITS RESPONDED ARRIVED AT 1237 TO FIND BUILDING EVACUATED AND THE ANNUNCIATOR LIGHT FOR THE 4TH FLOOR COMPUTER ROOM HALON SYSTEM ACTIVATED. UPON ARRIVAL TO 4TH FLOOR, FOUND HALON SYSTEM HAD DISCHARGED BUT THERE HAD NOT BEEN A FIRE. UPON INVESTIGATION DETERMINED MAN VAL PULL STATION BY THE HEAVY ENTRANCE/EXIT DOOR WAS HELD TOGETHER BY A SCREW THAT SCREWED INTO A PLASTIC EXTROVERTED HO LE. CLOSING OF THE DOOR OVER YEARS HAD VIBRATED THE PULL STATION CRACKING THE AREA AROUND THE HOLE UNTIL IT GAVE WAY ALL OWING THE FLAP OF THE BOX TO OPEN AND NO LONGER HOLD THE ACTIVATION BUTTON DOWN, WHEN EMPLOYEE LEFT ROOM FOR LUNCH STATE D THAT THE COUNT DOWN ALARM BEGAN WHEN THE DOOR SLAMMED SHUT. USED THE ABORT BUTTON ONCE BUT HAD FORGOTTEN IT ONLY START ED THE COUNT DOWN AGAIN. F D VERIFIED VENTILATION SYSTEM WAS CLOSED AND EXHAUSTED THE HALON OUTDOORS, THEN HAD GAS FREE READING TAKEN BEFORE ALLOWING PERSONNEL TO RETURN. SYSTEM WAS PLACED ON RESERVE.

Computer Room

RECORD ID: 89112991500 (CONTINUED) ***

--- CASUALTY # 8 ---

CATGY: MILITARY PERS

COND BEFORE INJ: AWAKE, UNIMPAIRED

ACTY AT TIME: FIRE CONTROL

NATURE OF INJ: NOT CLASSIFIED

DISPOSITION: TAKEN TO HOSPITAL BY NON-FD VEHICLE

TYPE: ACTION SEV: INJURY AGE: 24 TIME: 0935

SEX: M SVC/AFF: MARINE

COND PREV ESC: NO CONDITIONS PREVENTED ESCAPE, NOT A FACTOR

CAUSE OF INJ: EXPOSED TO CHEMICALS, RADIATION

PART BODY INJ: INTERNAL, INCLUDES RESPIRATORY SYSTEM/HEART

FAMLT W/STRUCT: 7 TO 12 MONTHS

--- CASUALTY # 9 ---

CATGY: MILITARY PERS

COND BEFORE INJ: IMPAIRED BY DRUGS, ALCOHOL

ACTY AT TIME: FIRE CONTROL

NATURE OF INJ: NOT CLASSIFIED

DISPOSITION: TAKEN TO HOSPITAL BY NON-FD VEHICLE

TYPE: ACTION SEV: INJURY AGE: 34 TIME: 0935

SEX: F SVC/AFF: MARINE

COND PREV ESC: NO CONDITIONS PREVENTED ESCAPE, NOT A FACTOR

CAUSE OF INJ: EXPOSED TO CHEMICALS, RADIATION

PART BODY INJ: INTERNAL, INCLUDES RESPIRATORY SYSTEM/HEART

FAMLT W/STRUCT: 7 TO 12 MONTHS

AT 0902 FD RESPONDED TO A FIRE ALARM AT BUILDING 1164 (RASC) DATA PROCESSING CENTER. RESPONSE OF EC #3 W/4, EC #4 W/4, 1 RUCK CO #1 W/4, RESCUE W/1, AN ASSISTANT CHIEF, AND A FIRE PREVENTION OFFICER, FOR A TOTAL OF 15 PERSONNEL. UPON ARRIVAL ALARM DISCOVERED STILL RINGING AND INDICATION OF SMOKE DETECTOR ACTIVATION IN THE MAIN COMPUTER ROOM. UPON ENTRY TO BUI LDING MAINTENANCE WORKER WAS FOUND SOLDERING ON AN A/C SYSTEM AND HAD ACTIVATED THE DETECTION SYSTEM. WITHIN MOMENTS, A SECOND DETECTOR ACTIVATED AND 1800W OF HALON 1311 DISCHARGED EVEN THOUGH THE ABORT SWITCH WAS ACTIVATED. AFTER THOROUGH R ESEARCH BY FIRE SYSTEM CONTRACTOR, DISCOVERED THAT A SYSTEM FLAW (AS DESIGNED BY NAVFAC) CAUSED THE BYPASS OF THE ABORT F UNCTION AND DUMPING OF THE SYSTEM. NO DAMAGE OCCURRED TO THE FACILITY OR SYSTEM, HOWEVER THE COST FOR REFILL AND PLACING BACK IN SERVICE IS APPROXIMATELY \$11,000. PANEL IS BEING ALTERED TO COMPLY WITH NFPA STANDARDS AND ELIMINATE THE AUTO B YPASS OF THE ABORT FUNCTION. CASUALTIES 1 THROUGH 9 EXPOSED TO PHOSGEBE GAS, WHICH IS TOXIC.

Electronic Equipment Room

TIME FRAME: JAN 89 THRU DEC 89
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 89071190100 (CONTINUED) ***

--- CASUALTY # 1 ---

CATGY: CONTRACT PERS TYPE: FIRE SEV: INJURY AGE: 23 TIME: 1337 SEX: F SVC/AFF: OTHER FAMILY W/STRUCT: 3 TO 6 MONTHS
COND BEFORE INJ: AWAKE, UNIMPAIRED
ACTY AT TIME: NOT CLASSIFIED
NATURE OF INJ: NOT CLASSIFIED
DISPOSITION: TAKEN TO HOSPITAL BY NON-FD VEHICLE

--- CASUALTY # 2 ---

CATGY: OTHER (GUESTS) TYPE: FIRE SEV: INJURY AGE: 16 TIME: 1337 SEX: F SVC/AFF: OTHER FAMILY W/STRUCT: LESS THAN 1 DAY
COND BEFORE INJ: AWAKE, UNIMPAIRED
ACTY AT TIME: NOT CLASSIFIED
NATURE OF INJ: COMPLAINT OF PAIN, INCL HEART ATTACK/STROKE
DISPOSITION: TAKEN TO HOSPITAL BY NON-FD VEHICLE

--- CASUALTY # 3 ---

CATGY: CONTRACT PERS TYPE: FIRE SEV: INJURY AGE: 33 TIME: 1337 SEX: F SVC/AFF: OTHER FAMILY W/STRUCT: 7 TO 12 MONTHS
COND BEFORE INJ: AWAKE, UNIMPAIRED
ACTY AT TIME: NOT CLASSIFIED
NATURE OF INJ: NOT CLASSIFIED
DISPOSITION: REFUSED HELP

--- CASUALTY # 4 ---

CATGY: CONTRACT PERS TYPE: FIRE SEV: INJURY AGE: 30 TIME: 1337 SEX: F SVC/AFF: OTHER FAMILY W/STRUCT: 7 TO 12 MONTHS
COND BEFORE INJ: AWAKE, UNIMPAIRED
ACTY AT TIME: NOT CLASSIFIED
NATURE OF INJ: COMPLAINT OF PAIN, INCL HEART ATTACK/STROKE
DISPOSITION: REFUSED HELP

THE FIRE DEPT. RESPONDED TO A REPORTED HALON SYSTEM ACTIVATION (RESPONSE WAS MADE DURING A SEVERE THUNDERSTORM) AND UPON ARRIVAL FOUND A NON-FIRE "DUMP" OF THE SYSTEM IN THE TELEPHONE OPERATORS SWITCHBOARD ROOM AND SWITCHGEAR ROOM. FOUR HALON INHALATION TYPE CASUALTIES WERE ALSO DEALT WITH BY FD AND HOSPITAL EMT'S IN THIS RESPONSE. ACCORDING TO HALON CONTRACT PERSONNEL (SAFETY CORP.), ACTIVATION WAS DUE TO A MANUAL OVER-RIDE PULL STATION RECEIVING A LIGHTING STRIKE DURING THE STORM. EMERGENCY RECEIVED VIA TELEPHONE WITHOUT AN AUTOMATIC ALARM DUE TO THE ENTIRE BUILDING #1 AUTOMATIC ALARM SYSTEM BEING OUT OF SERVICE BECAUSE OF IMPATIBILITY OF THE "OLD" AND "NEW" SYSTEMS. ACTION TO CORRECT THE PROBLEM HAVE BEEN MADE PRIOR TO THE INCIDENT. CAS 1 FOUND NEAR ROOM OF ACTIVATION COMPLAINTING OF DYSPEA AND NAUSEA. CAS 1 TREATED BY FD EMT'S UNTIL ARRIVAL OF HOSPITAL PERSONNEL WHICH TRANSPORTED FOR OBSERVATION. CAS 2 COMPLAINT AND TREATMENT SAME AS #1 CAS 3 STATED SHE HAD SOB NAUSEA AND HEADACHE INHALING HALON SO SHE QUICKLY EXITED THE AREA AND STATED SHE WOULD GO TO THE HOSPITAL ON HER OWN. CAS 4 STATED SHE WAS FRIGHTENED UPON ACTIVATION OF HALON AND FELL HURTING HER BACK SLIGHTLY. CAS 4 CHECKED BY FD EMT'S AND SHE SIGNED A SOR, BUT LATER WAS TRANSPORTED BY A MP VEHICLE VIA ORDERS OF THE HEALTH NURSE TO THE HOSPITAL.

RECORD ID: 89020191300 (CONTINUED) ***

RECEIVED NOTIFICATION AT 0745 HOURS OF ACCIDENTAL DUMP OF HALON SYSTEM IN "E" LAB AT BLDG 7504. INSTRUMENT AND PLUMBING SHOPS WORKING ON SYSTEM. A WRENCH FELL HITTING A SOLENOID PRESSURE RELIEF VALVE FOR THE SYSTEM, RESULTING IN ACCIDENTAL HALON DUMP.

-57- Electronic Laboratory

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----			NON GOVERNMENT PROPERTY DAMAGE LOSSES -----			NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TOTAL	TYPE	PROPERTY	INJ	DEATHS
VALUE: \$0	\$0	\$0	\$3,500,000	CONTRACTOR	PROPERTY	0	0
LOSS: \$0	\$0	\$0	\$1,650				

I.D. 89022390500

RESPONDED TO AN AUTOMATIC ALARM FOR LINCOLN LABS, ANNEX 6. UPON ARRIVAL WE DISCOVERED A HALON SYSTEM HAD DUMPED IN A COMPUTER ROOM. CAUSE OF DUMP WAS THE ACTIVATION OF TWO DETECTORS IN TWO SEPARATE ZONES AS THE SYSTEM IS DESIGNED TO WORK. THE ACTIVATION WOULD APPEAR TO BE FROM AN ELECTRICAL MALFUNCTION IN THE SUPPRESSION SYSTEM. LINCOLN LAB PERSONNEL HAD WORKED ON THE SYSTEM EARLIER THAT DAY IN AN ATTEMPT TO CORRECT PROBLEMS. NON AF LOSS IS \$1650.00 FOR 220 LBS OF HALON.

PAGE: 143

22 JAN 91

SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 89 THRU DEC 89

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 89021591500 (CONTINUED) ***

THIS INCIDENT WAS NOT A FIRE. FIRE DEPARTMENT EMPLOYEE WAS DISPATCHED AT 1843 HOURS TO BUILDING NO. 912, ROOM 201, TO PLACE THE HALON SYSTEM IN OVERRIDE WHILE SOLDERING WAS BEING ACCOMPLISHED. UPON ENTERING THE PROTECTED AREA, HE ENGAGED IN CONVERSATION. WHILE STILL ENGAGED IN CONVERSATION, HE UNLOCKED THE MANUAL HALON RELEASE STATION INSTEAD OF A MANUAL OVERRIDE AND DISCHARGED THE UNDERFLOOR HALON FIRE SUPPRESSION SYSTEM.

1 complete Room

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 89 THRU DEC 89

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 89021591500 (CONTINUED) ***

THIS INCIDENT WAS NOT A FIRE. FIRE DEPARTMENT EMPLOYEE WAS DISPATCHED AT 1843 HOURS TO BUILDING NO. 912, ROOM 201, TO PLACE THE HALON SYSTEM IN OVERRIDE WHILE SOLDERING WAS BEING ACCOMPLISHED. UPON ENTERING THE PROTECTED AREA, HE ENGAGED IN CONVERSATION. WHILE STILL ENGAGED IN CONVERSATION, HE UNLOCKED THE MANUAL HALON RELEASE STATION INSTEAD OF A MANUAL OVERRIDE AND DISCHARGED THE UNDERFLOOR HALON FIRE SUPPRESSION SYSTEM.

1 complete Room

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SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 89 THRU DEC 89

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

22 JAN 91

RECORD ID: 89031590500 (CONTINUED) ***

15 MAR 89 1722 HRS, FIRE ALARM CENTER WAS NOTIFIED HALON DISCHARGE MOD 3C, BLDG 400. BY AIC WHO WAS ESCORTING STEARNS A ND RODGERS PERSONNEL DURING HALON PANEL RE-CONNECT OPERATIONS. CREWS, (ASST CHIEF, ONE PUMPER) ARRIVED 1724 HRS. INVESTI GATIONS DETERMINED THAT THE PROPER HALON SEQUENCE FOR DISCHARGE HAD NOT OCCURRED; NO DETECTORS HAD ACTIVATED NO ALARM BEL LS, WARNING BELLS OR STROBE LIGHTS AND THAT THE HALON PANEL DID NOT SHOW THE PROPER NUMERICAL SIGNAL FOR HALON DISCHARGE .NO ALARM WAS RECEIVED BY FIRE ALARM CENTER FROM AUTOMATIC FIRE DETECTION SYST. OCCUPANTS OF MOD REPORTED NO WARNING PRI OR TO DISCHARGE. EMCS PERSONNEL COULD NOT FIND ANY PROBLEM WITH THE PANEL. FIELD REP FROM CHEMTRONICS THE SYSTEM (ARRIVE D) BUT AT THIS TIME CAUSE OF THE MALFUNCTION IS STILL UNDETERMINED. THE SYSTEM DISCHARGED A TOTAL OF 2049.5 LBS. OF HALO N 1301. AT A LOSS OF \$12,300.

Data Processing Center

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 89 THRU DEC 89

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

SHORE FIRE MANAGEMENT REPORT

22 JAN 91

RECORD ID: 89031490300 (CONTINUED) ***

AT 0850 HOURS, 14 MARCH 1989, THE FIRE COMMUNICATION CENTER RECEIVED NOTIFICATION VIA A DIRECT LINE FROM THE MUNITIONS M AINTENANCE SQUADRON OF A HALON SYSTEM ACTIVATION IN THE REFUEL/DEFUEL ROOM OF THE ALCM MAINTENANCE FACILITY, BUILDING 91 7. FIRE VEHICLES WERE DISPATCHED. UPON ARRIVAL, NO FIRE EXISTED BUT THE HALON SYSTEM HAD ACTIVATED DISCHARGING 960 POUND S OF HALON. DURING THE INVESTIGATION, AN OCCUPANT STATED THAT HE SLIPPED ON THE FLOOR AND ACCIDENTLY STRUCK THE MANUAL C HARGING DEVICE WITH HIS ELBOW ACTIVATING SYSTEM. HOWEVER, EVIDENCE INDICATED THAT THE SYSTEM MAY HAVE BEEN ACTIVATED BY M EANS OTHER THAN STATED BY THE OCCUPANT. THE GLASS THAT HAD COVERED THE MANUAL CHARGING DEVICE WAS SCATTERED FARTHER FROM THE AREA THAN WOULD NORMALLY BE EXPECTED FROM A LOW IMPACT. THE OCCUPANT WHO ALLEGED TO HAVE ACCIDENTLY ACTIVATED THE S YSTEM WOULD HAVE HAD DIFFICULTY DOING SO BECAUSE HE WAS SHORT RELATIVE TO THE HEIGHT OF THE CHARGING DEVICE. THE FLOOR D ID NOT APPEAR TO HAVE A SUBSTANCE ON IT THAT WOULD MAKE IT SLIPPERY. ALL UNITS RETURNED TO SERVICE AT 0933 HOURS.

Griffith AFB, AL

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22 JAN 91

SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 89 THRU DEC 89

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 89031790500 (CONTINUED) ***

ON 17 MARCH 1989 AT 1735 HRS., THE FIRE ALARM CENTER AT FALCON AFB WAS NOTIFIED OF A HALON DISCHARGE IN MOD 10 OF BLDG 400. THE ALARM WAS CALLED IN BY AMN 1002 CED/DEF, WHO WAS ESCORTING STEARNS AND ROGERS PERSONNEL DURING ROUTINE HALON PANEL RE-CONNECTS OPERATION. AS IN THE DISCHARGE OF 15 MARCH, NO WARNING OR PROPER SEQUENCE OF ACTIONS OCCURRED PRIOR TO DISCHARGE OF THE SYSTEM, AND NO ALARM WAS RECEIVED VIA THE AUTOMATIC ALARM SYSTEM. RESPONDING CREWS AND EMCS PERSONNEL COULD FIND NO APPARENT CAUSE FOR DISCHARGE. PER ORDER OF MSGT ALL RE-CONNECTS AND DISCONNECT OPERATIONS ON CHEMTRONICS HALON PANELS WERE SUSPENDED UNTIL THE SYSTEM COULD BE CHECKED OUT BY FACTORY REPRESENTATIVES. IN ADDITION, ALL HALON SYSTEMS WERE DISCONNECTED ELECTRONICALLY ON 21 MARCH. AUTOMATIC DETECTION REMAINS IN SERVICE. THE FACTORY REPRESENTATIVE ARRIVED ON 20 MARCH 1989 BUT AS OF THIS TIME, (21 MARCH 1989) THE CAUSE OF THE TWO DISCHARGES HAS YET TO BE DETERMINED. A \$1200 LOSS IN THE COST OF THE HALON WAS EXPERIENCED IN THIS SYSTEM ACCIDENT.

computer Rm

RECORD ID: 89032190300 (CONTINUED) ***

ON 21 MARCH 1989 AT 1827 HRS., THE FIRE DEPARTMENT ALARM CENTER AT FALCON AFB RECEIVED NOTIFICATION OF AN UNDER FLOOR HALON DISCHARGE IN MOD 18C, BLDG. 400. THE ASSISTANT CHIEF ON DUTY AND ALL FIREFIGHTERS WERE ON SCENE DUE TO AN EXERCISE IN THE BLDG. INVESTIGATION OF THE ALARM PANEL BY FIRE DEPARTMENT AND EMCS PERSONNEL RESULTED IN FINDING NO APPARENT CAUSE FOR THE DISCHARGE. THE PATTERN OF EVENTS CLOSELY FOLLOWED EVENTS LEADING UP TO TWO OTHER DISCHARGES IN THIS FACILITY WITHIN THE PAST SIX DAYS. THIS RECURRING PROBLEM IS UNDER INVESTIGATION. AS AN INTERIM MEASURE, ALL SOLONIDS CONNECTED TO THE HALON CYLINDERS THROUGHOUT THIS FACILITY WILL BE DISCONNECTED UNTIL THE CAUSE IS DETERMINED AND CORRECTIVE ACTION INITIATED. A TOTAL OF 639 LBS. OF HALON WAS DISCHARGED AT A LOSS OF \$3834.

Data Processing

RECORD ID: 89042590300 (CONTINUED) ***

--- CASUALTY # 1 ---

CATGY: MILITARY PERS TYPE: ACTION SEV: INJURY AGE: 21 TIME: 1317 SEX: M SVC/AFF: AIR FORCE FAMLY W/STRUCT: 7 TO 12 MONTHS

COND BEFORE INJ: AWAKE, UNIMPAIRED

ACTY AT TIME: ESCAPING

NATURE OF INJ: WOUND, CUT, BLEEDING

DISPOSITION: TAKEN TO HOSPITAL BY NON-FD VEHICLE

COND PREV ESC: NOT CLASSIFIED

CAUSE OF INJ: FELL OR STEPPED ON, OVER, INTO

PART BODY INJ: ARM

RECEIVED AN AUTOMATIC ALARM INDICATING THE HALON SYSTEM IN BLDG 852, SECTOR OPERATIONAL CONTROL CENTER, HQ 25TH AIR DIVISION, HAD DISCHARGED. UPON ARRIVAL THE SYSTEM HAD BEEN INADVERTENTLY DUMPED BY CIVIL ENGINEERING CRAFTSMEN DOING MAINTENANCE AND REPAIR. DURING EVACUATION ONE PERSON WAS SLIGHTLY INJURED WHEN HE FELL AND WAS STEPPED ON BY CO-WORKERS. DOLLAR LOSS IS FOR AGENT, CEILING TILE AND CLEANUP. 840 POUNDS HALON 1301 @ \$3.60 PER POUND = \$3,024.00; CLEANING AND REPAIR \$565.00, TOTAL \$3,589.00.

SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA
 JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE
 TIME FRAME: JAN 89 THRU DEC 89
 PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

22 JAN 91

RECORD ID: 89080990600 (CONTINUED) ***

AT 0953, A CODED FIRE ALARM SIGNAL WAS RECEIVED ON THE CENTRAL STATION RECEIVER IN THE FIRE ALARM COMMUNICATION CENTER FROM BUILDING NO. 878, ZONE 210. THE FOLLOWING EQUIPMENT WAS DISPATCHED: TWO PUMPERS, ONE RESCUE VEHICLE, ONE QUICK ATTACK VEHICLE, ONE AMBULANCE, AND A COMMAND VEHICLE. UPON ARRIVAL, ONE PUMPER WAS STAGED ON THE WEST SIDE. THE REMAINDER OF THE VEHICLES WERE STAGED ON THE SOUTH SIDE. THERE WERE NO VISIBLE SIGNS OF SMOKE OR FIRE FROM THE EXTERIOR OF THE BUILDING. FIREFIGHTERS ENTERED THE FACILITY, AND THE ANNUNCIATOR PANEL INDICATED A HALON SYSTEM ACTIVATION IN THE EQUIPMENT ROOM FOR THE T-4 CONTROL ROOM. FURTHER INVESTIGATION FOUND THE INSTALLED HALON SYSTEM HAD DISCHARGED IN THE EQUIPMENT ROOM. THE CAUSE OF THE SYSTEM DISCHARGE WAS A RESULT OF WATER ENTERING THE HALON CONTROL PANEL FROM A BROKEN WATER LINE ON THE FLOOR ABOVE. WATER SHORTED OUT THE DISCHARGE CIRCUIT IN THE HALON CONTROL PANEL. A REQUEST FOR CORRECTIVE ACTION TO PRECLUDE RECURRENCE IS BEING SUBMITTED TO HAVE A SHEET METAL SHIELD CONSTRUCTED ABOVE THE HALON CONTROL PANELS.

RECORD ID: 89051090900 (CONTINUED) ***

Aircraft & Rocket Assembly & Repair

AT 1818 HOURS, RECEIVED ALARM FROM BLDG 7450, B-1B SIMULATOR BUILDING, COMPUTER ROOM. FOUND NO VISIBLE FIRE OR SMOKE. DISCOVERED ONE 470 LB. HALON CYLINDER HAD DISCHARGED INTO COMPUTER ROOM. NO DAMAGE WAS DONE TO ANY COMPUTERS OR COMPONENTS. REPLACEMENT COST OF HALON 1301 IS \$4,845.00. PROBABLE CAUSE WAS OVERHEAD AIR CONDITIONING SYSTEM LOCATED IN COMPUTER VAULT ROOM OPERATING ON IMPROPER ELECTRICAL PHASING DUE TO POWER OUTAGE IN AREA.

RECORD ID: 89071490700 (CONTINUED) ***

RECEIVED CALL VIA 117 OF A HALON DISCHARGE AT BLDG T-615 BUT NOT FIRE. CHIEF-1, RESCUE, AND TWO P-8'S RESPONDED. SITUATION FOUND BY ARRIVING CREWS WAS ONE SECTION OF HALON SYSTEM HAD ACTIVATED AND DISCHARGED. INVESTIGATION REVEALED THAT ON-DUTY TECHNICIAN WAS AT HIS DESK WHEN THE FIRE ALARM SOUNDED. HE CHECKED ALL ROOMS FOR SMOKE AND FIRE, FINDING NEITHER. HE HIT THE HALON ABORT SWITCH AT THIS POINT FOR ROOM #6, THE COMPUTER ROOM. AT THE SAME TIME HE OBSERVED HALON BEING DISCHARGED INTO ROOM #7, THE STORAGE ROOM. TWO UNDERFLOOR DETECTORS WERE ACTIVATED IN TWO DIFFERENT ROOMS. NO CAUSE FOR ACTIVATION OF DETECTORS COULD BE FOUND. INSPECTION OF DETECTORS BY OUR FIRE SYSTEMS PERSON FOUND DETECTORS IN GOOD CONDITION AND FUNCTIONAL. BOTH ACTIVATED DETECTORS RESET PROPERLY. ONE 150 POUND HALON 1301 BOTTLE WAS FOUND DISCHARGED. RECHARGE COST FOR 150 POUNDS OF HALON 1301, PER BASE SUPPLY, WILL BE \$522. INCIDENT WAS NOT VIDEOED.

RECORD ID: 89071790100 (CONTINUED) ***

ON 17JUL89 AT 1540 HOURS FALCON FIRE DEPARTMENT RECEIVED AN ALARM ACTIVATION ON BLDG. 410, TRANSMITTER ROOM IN THE RADOME AREA, ASSISTANT CHIEF AND ENGINE 5 CREW RESPONDED. HALON IN THE TRANSMITTER ROOM HAD ACTIVATED WHICH IS LOCATED INSIDE THE RADOME. CAD-WELDING ABOVE TRANSMITTER ROOM WAS THE CAUSE FOR ACTIVATION. AIR CONDITIONING SYSTEM FOR THE TRANSMITTER ROOM WAS NEAR THE WELDING. A PERMIT FOR CONTEL WAS ISSUED BEFORE WELDING STARTED BY FIRE DEPARTMENT PERSONNEL. IT WAS ISSUED FOR THE SOUTH WALL OF RADOME AREA AND NOT BY THE AIR CONDITIONING UNITS. FIRE DEPARTMENT PERSONNEL AND THE BUILDING CUSTODIAN WERE TOLD THIS BY CONTEL CONTRACTORS.

SHORE FIRE MANAGEMENT REPORT

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FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DIMAGE

TIME FRAME: JAN 89 THRU DEC 89

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

22 JAN 91

RECORD ID: 89081191000 (CONTINUED) ***

A POWER OUTAGE WAS SCHEDULED FOR 11 AUG 1989 AT 0630. POWER WAS TURNED BACK ON AT APPROXIMATELY 0650. UPON THE REENERGIZING OF THE ELECTRICAL SYSTEM, THE HALON SYSTEM ACTIVATED. THE ACTIVATION OF THE HALON SYSTEM WAS CAUSED BY THE REENERGIZING OF THE FIRE CONTROL PANEL. THE MANUFACTURER AND THE CONTRACTOR STATED THAT THE SYSTEM ACTED NORMALLY IN THAT THE SYSTEM MUST BE DEACTIVATED PRIOR TO POWER OUTAGES AND RESET AFTER POWER IS RESTORED. THERE IS NO INDICATION OR INSTRUCTION TO THIS EFFECT. SYSTEM WILL BE REENGINEERED TO ELIMINATE THIS DEFICIENCY.

Computer Room

RECORD ID: 89092391400 (CONTINUED) ***

AT 0716 RECEIVED A CALL VIA ADMINISTRATIVE LINE, REPORTING THAT THE FIRE ALARM SYSTEM HAD ACTIVATED AT BUILDING 1440, R1 DLEY MISSION CONTROL. ASSISTANT CHIEF, RESCUE AND P-12 PUMPER WERE DISPATCHED. UPON ARRIVAL, FOUND THAT THE HALON SYSTEM HAD ACTIVATED. ONE COMPLETE BANK OF 200 LB HALON BOTTLES (6) EACH HAD DISCHARGED. INVESTIGATION REVEALED THAT TWO UNDER FLOOR SMOKE DETECTORS ACTIVATED (CROSS-ZONED); THEREBY CAUSING THE HALON SYSTEM TO DISCHARGE. A COMPLETE CHECK OF THE UNDERFLOOR AREA REVEALED NO FIRE RELATED CAUSE FOR THE DETECTORS TO ACTIVATE. A LARGE AMOUNT OF METAL CHIPS WERE FOUND ON THE BACK OF THE DETECTORS THEMSELVES AND ARE DETERMINED TO BE THE CAUSE OF THE ACTIVATION. THESE CHIPS WERE CREATED WHEN MAINTENANCE PERSONNEL DRILLED THROUGH THE FRAMEWORK OF THE RAISED FLOOR. THE DETECTORS IN THE AREA WERE CHECKED, CLEANED AS NECESSARY, AND PLACED BACK IN SERVICE.

"Special Properties" - Edwards AFB, Calif

RECORD ID: 89102691200 (CONTINUED) ***

AT 1229 RECEIVED AUTOMATIC ALARM (CODE 1) FROM FACILITY 70500. RESPONDED WITH P-12 PUMPER, P-10 RESCUE, P-20 PATROL VEHICLE. UPON ARRIVAL PERSONNEL HAD EVACUATED THE FACILITY. THERE WERE NO SIGNS OF SMOKE OR FIRE. FIRE ALARM PANEL INDICATED PROBLEM IN C.O.S. AREA, 4TH LEVEL, ROOM 411. LOCAL ANNUNCIATOR PANEL INDICATED HALON SYSTEM ACTIVATION. UPON ENTRANCE IT WAS DISCOVERED THAT A STEP-DOWN TRANSFORMER IN AN AIR HANDLER HAD SHORTED OUT AND ACTIVATED BUILT-IN HALON FLOODING SYSTEM. FIRE DAMAGE WAS CONFINED TO THE TRANSFORMER ITSELF. AREA WAS NOT OCCUPIED AT TIME OF INCIDENT.

Electronic Equipment Room

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----		NON GOVERNMENT PROPERTY DAMAGE LOSSES -----		NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE PROPERTY	INJ	DEATHS
VALUE: \$782,914	\$360	\$783,274	\$0	0	0
Loss: \$0	\$360	\$360			

FD-891099-1420

RECEIVED AN AUTOMATIC ALARM FROM DATA AUTOMATION, BUILDING 5007. UPON ARRIVAL, THE MANUAL PULL BOX IN THE LOBBY AREA WAS PULLED; THE HALON SYSTEM IN THE COMPUTER ROOM WAS IN ABORT. THE FIRE DEPARTMENT REPLACED THE GLASS AND ATTEMPTED TO RESET THE SYSTEM. THE ABORT BUTTON WAS DEACTIVATED BY THE OCCUPANT WHILE THE FIRE DEPARTMENT WAS REPLACING THE GLASS ON ANOTHER MANUAL DUMP STATION, WHICH CAUSED THE SYSTEM TO DUMP.

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 89 THRU DEC 89

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

SHORE FIRE MANAGEMENT REPORT

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22 JAN 91

RECORD ID: 89121891400 (CONTINUED) ***

VIA MONOCO SYSTEM, RECEIVED FOUR ROUNDS FROM BLDG 1409. VIA MMS STRAIGHT LINE, A REPORT OF ACTUAL FIRE. OCCUPANTS ADVISED THAT A MONORAIL HOIST MOTOR HAD SHORTED, CAUSING A STRONG SPARK AND HEAVY SMOKE. BUILDING WAS EVACUATED AND AN AFFMANUAL DUMP STATION WAS ACTIVATED. A HALON SYSTEM CONTROL BOX WAS EFFECTED BY AGENT FROM DELUGE, WHICH IN TURN ACTIVATED A HALON SYSTEM IN AN ADJACENT ROOM. ONLY TWO HALON CONTAINERS OF THREE FUNCTIONED. THE MALFUNCTIONING HALON CYLINDER WAS A SLAVE CYLINDER WHICH OPERATED OFF OF PRESSURE FROM THE MASTER CYLINDER. AS LONG AS PRESSURE IN THE MASTER CYLINDER WAS EQUAL TO OR GREATER THAN PRESSURE IN THE SLAVE CYLINDER, THE SLAVE UNIT WOULD DISCHARGE HALON. PRESSURE IN THE MASTER CYLINDER DECREASED AS THE AGENT DISCHARGED AND THE SLAVE UNIT SHUT ITSELF OFF. THIS SITUATION HAS BEEN RECTIFIED BY INSTALLING A DETENTIE PIN IN THE CONTROL HEAD OF THE SLAVE UNIT. ONCE DISCHARGE IS STARTED, THIS PIN HOLDS THE DISCHARGE HEAD IN THE OPEN POSITION UNTIL MANUALLY RESET. 24 FIREFIGHTERS ON DUTY, 15 RESPONDED.

-6.5-

Maintenance Shop

APPENDIX B
INADVERTANT OPERATION OF HALON SYSTEMS
NAVY SAFETY CENTER DATA - 1990

FOR OFFICIAL USE ONLY
JOB NUMBER: RC511EA

PAGE: 27

6 DEC 90

JOB TITLE:
TIME FRAME: JAN 90 THRU DEC 90
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 90C21891200 (CONTINUED) ***

AT APPROXIMATELY 1340 HOURS, THE GUARD AT BLDG 7000 CALLED THE FIRE DEPARTMENT COMMUNICATION'S CENTER ON THE ADMINISTRATION LINE TO REPORT A TROUBLE BUZZER ON THE HALON SYSTEM. ONE P-12 WITH A CREW OF FOUR WAS DISPATCHED TO INVESTIGATE. ON ARRIVAL, THE CREW MET THE SECURITY GUARD AND WENT TO THE HALON CONTROL PANEL ON THE SECOND FLOOR. THE CONTROL PANEL WAS CHECKED INDICATING TROUBLE IN ROOM 258. THE ROOM WAS CHECKED AND NOTHING UNUSUAL WAS FOUND. THE CREW CAPTAIN WENT TO THE CONTROL PANEL TO ATTEMPT A RESET. AS HE RELEASED THE RESET SWITCH THE GUARD HAD OPENED THE DOOR TO ROOM 258, USED A CIGARETTE LIGHTER TO LOCATE THE LIGHT SWITCH IN THE ROOM, AND AT THAT MOMENT THE HALON SYSTEM DISCHARGED. THE HALON BOTTLE FOR THE ROOM WAS CHECKED AND FOUND TO BE EMPTY. FURTHER INVESTIGATION REVEALED TWO UNDER FLOOR SMOKE DETECTORS ACTIVATED AND THE CLAXON HORN FOR THE HALON SYSTEM WAS FOUND TO BE IN THE SILENCE POSITION. ON ACTIVATION OF THE SYSTEM, THE FIRE CREWS HAD NO TIME TO ABORT THE HALON FROM DISCHARGING BECAUSE THE ALARM BELLS DID NOT ACTIVATE TO INDICATE A HALON DISCHARGE. THE MALFUNCTION OF THE HALON SYSTEM IS UNDER INVESTIGATION TO DETERMINE A CAUSE FOR THIS HALON DISCHARGE.

Complete. RFE

used Cig. Lighter To Locate Switch

RECORD ID: 90041791500 (CONTINUED) ***

ON 17 APRIL 1990 AT 0057 HOURS THE ALARM ROOM RECEIVED AN AUTOMATIC ALARM FROM BUILDING 920. PERSONNEL INSIDE THE BUILDING STARTED THEIR EVACUATION PROCEDURES. APPROXIMATELY ONE MINUTE AFTER THE INITIAL FIRE ALARM THE HALON SYSTEM INSIDE THE E 18 CRS PMEL AREA DISCHARGED. THERE WAS NO ADVANCED WARNING THAT THE HALON SYSTEM HAD BEEN ACTIVATED AND THE EVACUATION ALARMS FOR THE SYSTEM NEVER DID SOUND. INVESTIGATION REVEALED THAT NO DETECTORS OR MANUAL STATIONS HAD BEEN ACTIVATED. THERE HAD BEEN A POWER OUTAGE IN THAT AREA AND THE ALARM WAS RECEIVED RIGHT AFTER POWER WAS RESTORED. THE MOST PROBABLE CAUSE OF DISCHARGE IS A CIRCUIT CARD FOR THE HALON SYSTEM WAS DAMAGED DURING A POWER SURGE. DAMAGE WAS LIMITED TO 24 CEILING TILES, AND THE RECHARGING OF THE HALON SYSTEM.

Electronic Laboratory

RECORD ID: 90C42190300 (CONTINUED) ***

FIRE PROTECTION CREWS RESPONDED TO BUILDING 175, FLIGHT SIMULATOR. UPON ARRIVAL A COMPLETE SEARCH OF THE FACILITY REVEALED THAT THE HALON SYSTEM IN THE KC-135 FLIGHT STATION HAD DISCHARGED FOR NO APPARENT REASON. CONTRACT PERSONNEL HAD FINISHED WORKING ON A SYSTEM PANEL FOR THE SIMULATOR 45 MINUTES PRIOR TO THE DUMP. THE MOST PROBABLE CAUSES OF THE SYSTEM DISCHARGE WAS CONTRACTOR TECHNICIAN ERROR, WHILE TROUBLE SHOOTING REPAIRS. THERE WAS NO DAMAGE TO EQUIPMENT OR FACILITY AND NO FIRE. THE SYSTEM WAS RECHARGED ON 23 APRIL AND CONTRACTOR PAID FOR THE COST OF \$911.00 FOR HALON RECHARGING. THERE WERE 17 FIREFIGHTERS AND 1 SUPPORT COMMUNICATIONS OPERATOR ON DUTY, AND NO RECALL INITIATED.

School

- 64 -

STRUCTURE/MOBILE	CONTENTS	TOTAL	TOTAL	TYPE PROPERTY	INJ	DEATHS
ALUE: \$2,500,000	\$680,000	\$3,180,000	\$0		0	0
OSS: \$0	\$10,000	\$10,000	\$0			

IO 90042990700

SSGT FROM BUILDING 68, REPORTED THE INSTALLED HALON SYSTEM HAD DISCHARGED SOMETIME DURING THE WEEKEND. HE ALSO STATED A PIPE CONNECTED TO ONE OF THE 350LB CYLINDERS HAD BECOME DISCONNECTED. AFTER INVESTIGATION OF THE INCIDENT IT WAS CONFIRMED THERE WAS NO REASON FOR THE ACTIVATION. ALSO THE ALARM PANEL DID NOT TRANSMIT AN ALARM TO THE FIRE DEPARTMENT AND THE PANEL DISPLAYED AN IN SERVICE STATUS. FURTHER INVESTIGATION BY CONTRACTED SYSTEMS ENGINEERS DETERMINED THE PANEL DID NOT ACTIVATE THE SYSTEM AND ALL ASSOCIATED WIRING CONTROLS HAD NOT ACTIVATED. NO KNOWN CAUSE HAS BEEN DETERMINED.

Major Service Shop

RECORD ID: 90050491200 (CONTINUED) ***

AT 0928, RECEIVED NOTIFICATION VIA C.E. RADIO OF AN INADVERTENT HALON SYSTEM ACTIVATION IN ROOM 107 OF BUILDING 7540, AVIONICS MAINTENANCE SQUADRON. ON ARRIVAL, THE RESCUE CREW SEARCHED THE BUILDING FOR CASUALTIES AND FOUND NONE. THE BUILDING WAS VENTILATED. ONE AMBULANCE RESPONDED AND CHECKED 20 PERSONNEL WHO WERE WORKING IN THE BUILDING, NO INJURIES. INVESTIGATION REVEALED INSTRUMENT SHOP WAS WORKING ON THE SYSTEM AND ACCIDENTALLY ACTIVATED IT.

Electronics Lab

RECORD ID: 90071990300 (CONTINUED) ***

ON 19 JULY 1990 AT 1849 HOURS THE ALARM ROOM RECEIVED AN AUTOMATIC ALARM FROM BLDG 926. UPON ARRIVAL AT THE FACILITY, FIREFIGHTERS OBSERVED SMOKE AND WERE INFORMED BY THE PACAF IG TEAM THAT THIS WAS AN EXERCISE. AFTER THE EXERCISE WAS TERMINATED, IT WAS DISCOVERED THAT THE HALON SYSTEM IN THE COMPUTER ROOM HAD DISCHARGED. THE INVESTIGATION REVEALED THAT THE HALON SYSTEM ACTIVATED WHEN SMOKE FROM A SMOKE POT ENTERED THE AIR CONDITIONING SYSTEM AND ACTIVATED THE SMOKE DETECTORS.

RECORD ID: 90050790100 (CONTINUED) ***

AT 2147 HRS., RECEIVED A HALON ACTIVATION ALARM FROM BLDG 5004. CH-1, PUMPER 8, PUMPER 9 AND RESCUE 7 RESPONDED. ON ARRIVAL THE BLDG WAS FOUND SECURED AND UNOCCUPIED. AFTER GAINING ENTRY IT WAS DISCOVERED THAT THE HALON SYSTEM HAD ACTIVATED. HALON HAD TO BE VENTILATED FROM THE BUILDING. INVESTIGATION SHOWED THAT THE HUMIDITY CONTROL ELEMENT OVER HEATED CAUSING IT TO RELEASE SMOKE WHICH ACTIVATED THE FIRE SUPPRESSION SYSTEM. THE TAEGU FIRE FIGHTERS PERFORMED IN AN OUTSTANDING MANNER.

Computer Room

RECORD ID: 90061291100 (CONTINUED) ***

ON 12 JUN 90, AT 1805, THE ALARM ROOM RECEIVED AN AUTOMATIC ALARM FROM ZONE 4, BLDG 58, DATA PROCESSING CENTER. AT 1806 THEY RECEIVED A CALL VIA 5117 OF AN INADVERTENT DISCHARGE OF THE HALON SYSTEM. CHIEF-2, P-10, AND P-8 RESPONDED. UPON ARRIVAL, CHIEF-2 MET WITH THE OCCUPANT AND CONFIRMED NO FIRE; HOWEVER, THE HALON 1301 SYSTEM HAD ACTIVATED. AT THIS TIME THE REMAINDER OF THE HALON SYSTEMS WERE IMMEDIATELY DEACTIVATED. THE CONTROL SHOP WAS NOTIFIED AND UPON ARRIVAL, WERE BRIEFED BY CHIEF-2. INVESTIGATION REVEALED THAT DUST PARTICLES HAD ACTIVATED THE SMOKE DETECTORS WHICH CAUSED THE SYSTEM TO ACTIVATE. WORKMEN HAD BEEN WORKING IN THE SUBFLOOR AREA DURING THE DAY. THERE WERE 19 PEOPLE ON-DUTY AND THE LAST TRUCK WAS BACK IN THE STATION AT 1902.

Computer Room

OFFICIAL USE ONLY
NUMBER: RG511EA

SHORE FIRE MANAGEMENT REPORT

PAGE: 90

06 DEC 90

TITLE:

E FRAME: JAN 90 THRU DEC 90

PARFO UY: AVIATION/SHORE BRANCH, NAVSAFECEN

ORD ID: 90062191100 (CONTINUED) ***

AT 0457 RECEIVED REPORTED FIRE IN COMPUTER ROOM VIA 117A AND CODED ALARM SIMULTANEOUSLY. NIGHT WORKER NOTED CLOUD OF SMOKE COMING FROM TGP OF COMPUTER AND CHOSE TO ALLOW HALON SYSTEM TO ACTIVATE. ON ARRIVAL RESCUE-10 REPORTED HALON SYSTEM HAD ACTIVATED, NO SIGN OF FIRE. ROOM VENTILATED AND SUBSEQUENT INVESTIGATION SHOWED A SWITCH ON COMPUTER POWER SUPPLY UNIT ON ONE COMPUTER HAD MALFUNCTIONED CAUSING SMOKE & ACTIVATION OF 3 SMOKE DETECTORS. CH-2, P-8, P-10, P-12 AND P-20 RESPONDED. VIDEO CAMERA INOPERATIVE, NOT USED. POWER SUPPLY SWITCH - \$969.00. HALON DUMPED \$1556.00.

ORD ID: 9007C291500 (CONTINUED) ***

ON 2 JULY 1990, THE ON-DUTY CONTROLLER STARTED ENGINE #2. AS ENGINE STARTED THE FIRE ALARM WENT OFF WITH THE DISCHARGE OF BOTH THE MAIN AND RESERVE TANKS FOR A TOTAL DISCHARGE OF 750 LBS OF HALON 1211. OCCUPANTS CLAIM THAT THE HALON DISCHARGED BOTH TANKS IMMEDIATELY UPON ALARM ACTIVATION. AN ATTEMPT WAS MADE TO ABORT THE DISCHARGE BY THE CONTROLLER. REPRESENTATIVES FROM THE CONTRACTOR CAME OUT TO TROUBLESHOOT THE SYSTEM. THEY WERE UNABLE TO RECREATE THE CIRCUMSTANCES THAT CAUSED THE SIMULTANEOUS DISCHARGE. RESULTS OF THEIR TESTS WERE: 1) A FAULTY HEAT DETECTOR WAS ACTIVATED BY ENGINE VIBRATION, 2) A 22 SECOND DELAY PERFORMED AS DESIGNED ON EVERY TEST, 3) UNABLE TO CAUSE SIMULTANEOUS DISCHARGE OF MAIN AND SECONDARY HALON TANKS.

Electric Generating Plant

ORD ID: 90071791700 (CONTINUED) ***

ON 17 JUL 90, THE SAC HANGARS SUFFERED A MOMENTARY LOSS IN POWER. THE SURGE THAT OCCURRED WHEN THE POWER WAS RESTORED CAUSED THE LOGIC CHIP, LM339, TO GO INTO ALARM, DUMPING 85 LBS OF HALON INTO ROOM 115. THIS PROBLEM HAS BEEN IDENTIFIED BY FIRE TECH FOR THIS PARTICULAR ALARM PANEL DESIGN. SURGE SUPPRESSORS WERE ON ORDER, AND WILL BE INSTALLED BY 5099 CEOS AS SOON AS THEY ARE RECEIVED. THESE SURGE SUPPRESSORS SHOULD ELIMINATE ANY FURTHER POWER SURGE PROBLEMS.

Computer Facilities

ORD ID: 90072090300 (CONTINUED) ***

RECEIVED VIA AUTOMATIC FIRE ALARM SYSTEM (FROM BLDG 857) AND VIA ADMINISTRATIVE LINE 279-6027 OF A COMPUTER FIRE IN ROOM 322. EQUIPMENT RESPONDED WERE, 500 GPM PUMPER, 750 GPM PUMPER, RESCUE VEHICLE, AND A COMMAND AND CONTROL VEHICLE. ACCESS WAS GAINED TO THE REPORTED FIRE AREA AND TWO 1 3/4 INCH ATTACK LINES WERE ADVANCED. UPON ENTERING THE COMPUTER ROOM NO SMOKE OR FIRE WERE VISIBLE. HALON SYSTEM WAS MANUALLY ACTIVATED AND COMPUTER WAS POWERED DOWN. EMERGENCY TERMINATED AT 1550 HOURS. LATER INSPECTION BY USER REVEALED A POWER SUPPLY DISK UNIT OVERHEATED.

FOR OFFICIAL USE ONLY

JOB NUMBER: RC511EA

JOB TITLE:

TIME FRAME: JAN 90 THRU DEC 90

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

SHORE FIRE MANAGEMENT REPORT

06 DEC 90

PAGE: 113

RECORD ID: 90C8C291200 (CONTINUED) ***

VIA 117 AND REPCO ALARM REPORTING SYSTEM, RECEIVED NOTIFICATION OF ALARMS RINGING IN BUILDING 2670, DATA AUTOMATION. THE CALLER INDICATED THE BUILDING WAS BEING EVACUATED. CHIEF 2 (DEPUTY CHIEF), ENGINE 9 (P-2) AND RESCUE 7 (P-10) RESPONDED. UPON ARRIVAL, CHIEF 2 WAS INFORMED THAT THE HALON SYSTEM IN THE COMPUTER ROOM DISCHARGED. FIRE FIGHTERS ENTERED THE BUILDING AND CONFIRMED THE SYSTEM OPERATED BUT COULD NOT FIND EVIDENCE OF FIRE. THE ENGINE CREW BEGAN VENTILATING THE ROOMS AFFECTED. INVESTIGATION REVEALED A HIGH PRESSURE SAFETY SWITCH ON A 5 TON AIR CONDITIONING COMPRESSOR FAILED. THIS ALLOWED FREON AND OIL VAPORS FROM THE CRANKCASE TO VENT INTO THE STORAGE ROOM AND ACTIVATE THREE SMOKE DETECTORS, ACTIVATING THE HALON SYSTEM. TOTAL HALON DISCHARGED WAS 1215 POUNDS. NO OTHER DAMAGE AS EVIDENT OR REPORTED BY DATA AUTOMATION. A FIRE FORCE LOSS \$8,500.

FOR OFFICIAL USE ONLY

JOB NUMBER: RC511EA

JOB TITLE:

TIME FRAME: JAN 90 THRU DEC 90

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

SHORE FIRE MANAGEMENT REPORT

06 DEC 90

PAGE: 137

RECORD ID: 90C92890700 (CONTINUED) ***

AT 2042 HOURS, RECEIVED FIRE ALARM FOR BUILDING 2640. ON ARRIVAL, RESCUE CREW CHIEF REPORTED ALARM INDICATION OF A DUCT DETECTOR ACTIVATION IN ROOMS 142 AND 152. A SEARCH OF THE ROOMS REVEALED NO SMOKE OR FIRE. THE RESCUE CREW WAS THEN DIRECTED TO RESET THE SYSTEM. AT 2052 HOURS, THE SYSTEM RESET AND THE EMERGENCY WAS TERMINATED. AT 2058 HOURS, RECEIVED FIRE ALARM FROM BUILDING 2640 AND A REPORT FROM THE RESCUE CREW CHIEF. THE HALON SYSTEM HAD DUMPED IN ADJACENT ROOMS 142 AND 152. INVESTIGATION REVEALED THAT DUST AND HUMIDITY FROM AIR HANDLING SYSTEM STARTING UP CAUSED TWO UNDER FLOOR DETECTORS TO ACTIVATE. THE ESTIMATED LOSS IS FOR THE RESERVICING OF THE HALON SYSTEM. THERE WERE 19 FIRE FIGHTERS ON DUTY.

Dec 90 School

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APPENDIX C
INADVERTANT OPERATION OF CARBON DIOXIDE SYSTEMS
NAVY SAFETY CENTER DATA, 1980

FOR OFFICIAL USE ONLY
JOB NUMBER: 80511EA
JOB TITLE: DOD FXD EXT SYS W/ DMAGE
TIME FRAME: JAN 80 THRU DEC 80
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

SHORE FIRE MANAGEMENT REPORT

10 APR 91

PAGE: 2

RECORD ID: 80011120600 (CONTINUED) ***

CO2 SYSTEM ACTIVATED IN BLDG CALLING THE F. D. UPON ARRIVAL FOUND CO2 DUMPED IN CONTROL ROOM AND CELL 18. ELECTRICAL MALFUNCTION WAS THE CAUSE OF SYSTEM ACTIVATION.

Rocket Assembly Facility, As Collateral Damage

STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE PROPERTY	NUMBER OF INJ DEATHS
VALUE: NOT REPTD	\$0	\$0		0
LOSS: \$100	\$0	\$100		0

ID 80 04 1590200

BOX 4-2-3 RECEIVED AT 1407 FOR BLDG 513 ARRIVED FOUND CO2 FIXED SYSTEM HAND HOSELINE ACTIVATED. FIREFIGHTERS WEARING BRE THING APPARATUS EVACUATED PERSONNEL AS EVACUATION ALARMS WERE NOT SOUNDING. ALARM DID NOT SOUND DUE TO A FAULTY RELAY SW ITCH IN ALARM PANEL. ACTIVATION OF THE CO2 SYS WAS CAUSED BY A FAULTY PRESSURE SWITCH WHICH HAS BEEN REPAIRED.

"Educational Property"

STRUCTURE/MOBILE	CONTENTS	TOTAL	NON GOVERNMENT PROPERTY DAMAGE LOSSES	NUMBER OF INJ DEATHS
VALUE: NOT REPTD	\$0	\$0		0
LOSS: \$100	\$0	\$100		0

ID: 80050990300

CALL AT 2124 REPORTING A CO2 LEAK IN FASO AREA OF HANGAR #1. FOUND CO2 FIXED SYSTEM HANDLINE HOSE ACTIVATED AND LEAKING CO2. SYSTEM WAS DRAINED AND RESERVED BOTTLES PLACED IN SERVICE. CAUSE: MALICIOUS ACTIVATION OF SYSTEM BY PERSON OR PERSON'S UNKNOWN. ALARM TRANSMISSIONAL AND EVACUATION DID NOT OPERATE DUE TO SYSTEM BEING OUT OF SERVICE. ATTEMPTS TO HAVE SYSTEM PLACED IN SERVICE HAVE FAILED.

"Educational Property"

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----			NON GOVERNMENT PROPERTY DAMAGE LOSSES -----			NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TOTAL	TYPE PROPERTY		INJ	DEATHS
VALUE: NOT REPTD	\$0	\$0	\$0			0	0
LOSS: \$100	\$0	\$100	\$0			0	0

J.D. 80060390400

AT 1400 FIRE INSPECTOR P.W. ELECTRICIAN AND P.W. PLUMBER WERE CONDUCTING A QUARTERLY TEST OF SPRINKLER SYS IN HANGAR ONE. AS THEY WALKED PAST BANK OF CO2 BOTTLES NOTICED IT LEAKING. INVEST FOUND CO2 FIXED SYS HANDLINE HOSE ACTIVATED. SAME SY S WAS ACTIVATED ON 5/9/80. CAUSE: UNKNOWN. NO HANDLE PULLED LACK OF SUFFICIENT EVIDENCE TO DETERMINE CAUSE. ALARM TRANSMITTER L AND EVACUATION ALARMS DID NOT OPERATE DUE TO SYSTEM MALFUNCTION.

"Educational"

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----			NON GOVERNMENT PROPERTY DAMAGE LOSSES -----			NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TOTAL	TYPE PROPERTY		INJ	DEATHS
VALUE: NOT REPTD	\$0	\$0	\$0			0	0
LOSS: \$100	\$0	\$100	\$0			0	0

J.D. 80090290400

TELEPHONE CALL RECEIVED AT 1414 CO2 HANDLINE SYSTEM ACTIVATED IN BLDG 513. FIREFIGHTERS PULLED THE HOSE OUTSIDE AND DRAINED SYSTEM. ACTIVATION OF CO2 SYSTEM WAS MALICIOUS ACT BY PERSON'S UNKNOWN. ALARM SYSTEM OUT OF SERVICE SINCE 28 AUGUST. P.W. WORKING TO RESTORE SYSTEM.

"Educational"

APPENDIX C
INADVERTANT OPERATION OF CARBON DIOXIDE SYSTEMS
NAVY SAFETY CENTER DATA, 1981

FOR OFFICIAL USE ONLY
JOB NUMBER: R0511EA
JOB TITLE: DOD FXD EXT SYS W/ DMAGE
TIME FRAME: JAN 81 THRU DEC 81
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN
SHORE FIRE MANAGEMENT REPORT
10 APR 91
PAGE: 11

RECORD ID: 81033190800 (CONTINUED) ***

--- CASUALTY # 1 ---
CATGY: CIV SVC PERS TYPE: ACTION SEV: INJURY AGE: 39 TIME: 1430 SEX: M SVC/AFF: NAVY FAMILY W/STRUCT: 1 TO 7 DAYS
COND BEFORE INJ: AWAKE, UNIMPAIRED COND PREV ESC: MOVED TOO SLOWLY, INCORRECT ESCAPE PROCEDURES
ACTY AT TIME: UNABLE TO ACT CAUSE OF INJ: RUBBED BY, CONTACT WITH
NATURE OF INJ: ASPHYXIA/SMOKE ONLY PART BODY INJ: INTERNAL, INCLUDES RESPIRATORY SYSTEM/HEART
DISPOSITION: TAKEN TO HOSPITAL BY NON-FD VEHICLE

AT 1435 RECEIVED A CALL CO2 SYSTEM ACTIVATED IN BUILDING #467. FOUND CO2 FIXED SYSTEM HAD ACTIVATED DURING TESTING OF SMOKE DETECTOR WHICH WAS JUST INSTALLED. ONE PERSON WAS OVERCOME BY CARBON DIOXIDE GAS. HE WAS TRANSPORTED TO MEDICAL CENTER. SMOKE DETECTOR WAS BEING TESTED WHEN IT ACTIVATED CO2 SYSTEM. NOT KNOWN BY PWC THAT SYTEM IS INTERCONNECTED. VICTIM WAS CAUGHT INSIDE. OTHER WORKERS EVACUATE THE BUILDING. TWO MEN WENT IN AND PULLED THE INJURED MAN OUT.

CO2 System - No Callout Design
Building under Renovation

FOR OFFICIAL USE ONLY
JOB NUMBER: R0511EA
JOB TITLE: DOD FXD EXT SYS W/ DMAGE
TIME FRAME: JAN 81 THRU DEC 81
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN
SHORE FIRE MANAGEMENT REPORT
10 APR 91
PAGE: 17

RECORD ID: 81051890300 (CONTINUED) ***

1. CALLED AUTOMATICALLY TO BUILDING 66. ENGINE TEST CELLS BY A FLOW OF CO2. FOUND PRIVATE CONTRACTOR WORKING ON TEST CELL #1
1. CONTRACTOR SHORTED OUT ELECTRICAL ACTIVATION CONTROLS OF CO2 SYSTEM. PW SECURED MAIN CO2 TANK VALVE, LIMITING LOSS TO ONLY 1 TON OF CO2.

APPENDIX C
INADVERTANT OPERATION OF CARBON DIOXIDE SYSTEMS
NAVY SAFETY CENTER DATA, 1982

FOR OFFICIAL USE ONLY
JOB NUMBER: R0511EA
JOB TITLE: DOD FXD EXT SYS W/ DMAGE
TIME FRAME: JAN 82 THRU DEC 82
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN
SHORE FIRE MANAGEMENT REPORT
10 APR 91
PAGE: 19

RECORD ID: 82111890100 (CONTINUED) ***

--- CASUALTY # 1 ---

CATGY: MILITARY PERS TYPE: ACTION SEV: INJURY AGE: 34 TIME: 1130 SEX: M SVC/AFF: NAVY FAMLY W/STRUCT: OVER 1 YEAR
COND BEFORE INJ: AWAKE, UNIMPAIRED
CAUSE OF INJ: EXPOSED TO CHEMICALS, RADIATION
NATURE OF INJ: NOT CLASSIFIED
PART BODY INJ: INTERNAL, INCLUDES RESPIRATORY SYSTEM/HEART
DISPOSITION: TAKEN TO HOSPITAL BY NON-FD VEHICLE

NO FIRE AT 1130 BUILT-IN CARBON DIOXIDE FLOOD SYSTEM ACCIDENTLY DISCHARGED BY MAINTENANCE WORKERS FROM P.W. PERSONNEL EV
ACUATED F.D. PERSONNEL USING SELF-CONTAINED BREATHING APPARATUS VENTILATED BUILDING CHECKED FOR POCKETS FO CARBON DIOXID
E USING COMINATION EXPLOSIVE AND OXYGEN METER. CASUALTY 1 WAS OVERCOME BY CO2, TREATED AND RELEASED.

----- GOVERNMENT PROPERTY DAMAGE LOSSES ----- NON GOVERNMENT PROPERTY DAMAGE LOSSES -----
STRUCTURE/MOBILE CONTENTS TOTAL TYPE PROPERTY TOTAL INJ DEATHS
VALUE: \$18,130,247 \$16,000,000 \$34,130,247 \$0 0 0
LOSS: \$644 \$0 \$644 \$0

ID-8204019040

AT 1455 ALARM TRANSMITTED TO FD. RESPONDED TO BUILDING 379 FOUND FLOW ROOM FILLED WITH CARBON DIOXIDE. NO FIRE. THERMOST
AT FOR STEAM HEAT HAD IT'S TEMPERATURE SELECTOR DIAL REMOVED NOT ALLOWING HEAT TO SHUT OFF. FAST HEAT BUILD UP, CAUSING A
CTUATION OF HEAT DETECTOR AND CO2 SYSTEM.

CO2 No Damage

APPENDIX C
INADVERTANT OPERATION OF CARBON DIOXIDE SYSTEMS
NAVY SAFETY CENTER DATA, 1983

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----			NON GOVERNMENT PROPERTY DAMAGE LOSSES -----			NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TOTAL	TYPE	PROPERTY	INJ	DEATHS
VALUE: \$5,124,568	\$0	\$5,124,568	\$0			0	0
LOSS: \$0	\$0	\$0					

ID 8301490300

AT 1002 RECEIVED ALARM BOX 126 BUILDING 133, NAVAL AIR REMARK FACILITY. UPON ARRIVAL FOUND THAT CARBON DIOXIDE EXTINGUISHING SYSTEM IN THE NO. 3 ENGINE TEST CELL HAD ACTIVATED. NO FIRE PRESENT. CO2 SYSTEM HAD BEEN ACTIVATED BY EXHAUST HEAT FROM ENGINE BEING TESTED. ENGINE EXHAUST SYSTEM HAD NOT BEEN PROPERLY HOOKED UP BY PERSONNEL TESTING ENGINE.

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----			NON GOVERNMENT PROPERTY DAMAGE LOSSES -----			NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TOTAL	TYPE	PROPERTY	INJ	DEATHS
VALUE: \$0	\$0	\$0	\$0			0	0
LOSS: \$0	\$0	\$0					

ID 83033190300

← Liquid Tank Storage

AT 2137 BOX 231 CAME IN FOR TANK FARM "A". UPON ARRIVAL, WAS MET BY A CONTRACTOR FROM DYNETERIA WHILE GOING DOWN INTO THE HOLE, HIS GEAR CAUGHT ONTO THE CO2 SYSTEM DUMPING AND TURNING IN ALARM.

CO2 System - No Damage

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----			NON GOVERNMENT PROPERTY DAMAGE LOSSES -----			NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TOTAL	TYPE	PROPERTY	INJ	DEATHS
VALUE: \$827,000	\$0	\$827,000	\$0			0	0
LOSS: \$600	\$0	\$600					

ID 83081690200

1420 STATION #6 RECEIVED CALL FROM NSD ENGINEERING OFFICE CO2 FIXED SYSTEM LEAKING. FOUND SYSTEM ON MAIN BANK ACTIVATED. LEAKS WERE FOUND IN MECHANICAL ROOM AREA, ON PIPING JOINTS AND CYLINDER HEADS. CAUSE THAT ACTIVATED SYSTEM WAS A DEFECTIVE TRIGGER MECHANISM ONE CYLINDER HEAD. \$600.00 FOR REFILLING CO2 CYLINDER.

General Business Office - Supply Depot

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----			NON GOVERNMENT PROPERTY DAMAGE LOSSES -----			NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TOTAL	TYPE	PROPERTY	INJ	DEATHS
VALUE: \$827,000	\$0	\$827,000	\$0			0	0
LOSS: \$600	\$0	\$600					

ID 83082390300

0958 RECEIVED CALL FROM C.E. OFFICE REPORTING ACTIVATED CO2 SYSTEM IN BUILDING #3190. INVESTIGATION REVEALED BOTH CONTROL HEADS ON MAIN BANK ACTIVATED AND DID NOT ACTIVATE BUILDINGS EVACUATION ALARM. CAUSE, MALFUNCTION OF ELECTRICAL SYSTEM.

Business Office - Supply Depot

APPENDIX C INADVERTANT OPERATION OF CARBON DIOXIDE SYSTEMS NAVY SAFETY CENTER DATA, 1984

FOR OFFICIAL USE ONLY
JOB NUMBER: R0511CA
JOB TITLE: DOD FXD EXT SYS W/ DMAGE
TIME FRAME: JAN 84 THRU DEC 84
PREPARED BY: AVIATION/SHORE BRANCH, NAUSAFECEN

10 APR 91

RECORD ID: 84021690200 (CONTINUED) ***

--- CASUALTY # 1 ---

CATGY: CIV SVC PERS TYPE: ACTION SEV: INJURY AGE: 46 TIME: 0915 SEX: M SVC/AFF: NAVY FAMLY W/STRUCT: OVER 1 YEAR
COND BEFORE INJ: AWAKE, UNIMPAIRED COND PREV ESC: VICTIM INCAPACITATED PRIOR TO IGNITION
ACTY AT TIME: ESCAPING CAUSE OF INJ: FELL OR STEPPED ON, OVER, INTO
NATURE OF INJ: WOUND, CUT, BLEEDING PART BODY INJ: MULTIPLE PARTS
DISPOSITION: TAKEN TO HOSPITAL BY NON-FD VEHICLE

AT 0917 HOURS, RECEIVED CALL REPORTING ALARM BELLS IN BUILDING 137, NAVAL AIR REMORK FACILITY, ARE SOUNDING. UPON ARRIVA
L DISCOVERED CO2 SYSTEM HAD DUMPED IN THE CSOS TEST CELL. AT 0923 MARF SUPERVISOR DISCOVERED WORKER LYING ON FLOOR IN TH
E CSOS TEST CELL. WORKER REMOVED FROM TEST CELL. TRANSPORTED TO HOSPITAL. POWER FAILURE OCCURRED POWER WAS RESTORED AT 0
915. IT WAS AT THIS TIME THAT SYSTEM ACTIVATED. WHEN ALARM SOUNDED WORKER STOOD QUICKLY STRIKING HIS LEFT SHOULDER AND H
IS FACE. WORKER WAS DAZED AND FELL TO FLOOR HE BEGAN TO CRAWL TO TRY TO EXIT THE TEST CELL. WORKER BECAME CONFUSED AND L
OST HIS SENSE OF DIRECTION. SIX MINUTES ELAPSED BETWEEN TIME CO2 ALARM SOUNDING AND THE DISCOVERY OF WORKER IN THE TEST
CELL. INTERIOR ALARMS DID ACTIVATE THE STREET MASTER FIRE ALARM BOX, BUT THE ALARM WAS NOT TRANSMITTED. REASON FOR ACTIV
ATION SYSTEM COULD NOT BE DETERMINED. THERE WAS ONLY AN ELEVEN SECOND INTERVAL BETWEEN SOUNDING OF ALARM AND DUMPING OF
CO2.

CO2 - Injury

RECORD ID: 84080890200 (CONTINUED) ***

AT 1425 RECEIVED A CALL THAT THE UNDERFLOOR CO2 SYSTEM AT BUILDING 350 ANACOSTIA HAD ACTUATED. UPON ARRIVAL AND INVESTIG
ATION FOUND CASE TO BE P.W. MAINTENANCE CLEANING THE SMOKE DETECTORS. F. D. RESTORED THE SYSTEM TO SERVICE UTILIZING THE
RESERVE BANK AND RESET THE ALARM SYSTEM.

No LOSS

----- GOVERNMENT PROPERTY DAMAGE LOSSES -----		NON GOVERNMENT PROPERTY DAMAGE LOSSES -----		NUMBER OF	
STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE PROPERTY	INJ	DEATHS
VALUE: \$11,965,000	NOT REPTD \$11,965,000	\$0		0	0
LOSS: \$0	\$720	\$720			

AT 1110 HOURS, RECEIVED CODED ALARM FROM BUILDING 1830, WEIGHTS AND BALANCE HANGAR. UPON ARRIVAL, FIRE FIGHTING PERSONNE
L WERE DIRECTED BY PERSONNEL WORKING IN HANGAR TO WHERE THEY HAD SEEN EITHER MIST OR SMOKE. UPON INVESTIGATION OF THE AR
EA, IT WAS DETERMINED THAT A PERSON/PERSONS UNKNOWN HAD MISTAKENLY ACTIVATED BELOW GROUND CO2 FLOOD SYSTEM.

84091170400

CO2 System - "Damage" (710) apparently cost of CO2

APPENDIX C
INADVERTANT OPERATION OF CO2 SYSTEMS
NAVY SAFETY CENTER DATA, 1985

FOR OFFICIAL USE ONLY

JOB NUMBER: ROST11EA

JOB TITLE: REPORT FOR DR, LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 85 THRU DEC 85

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

SHORE FIRE MANAGEMENT REPORT

22 JAN 91

PAGE: 126

RECORD ID: 85121990400 (CONTINUED) ***

AT 1414 HOURS ON 19 DEC 85 FIRE STATION #3 RECEIVED A CALL ON FIRE PHONE 117 REPORTING A CO2 ACTIVATION AND (2) TWO PERSONNEL UNACCOUNTED FOR AT BLDG. 18B IN AREA "B". UPON ARRIVAL FIREFIGHTERS FOUND THAT THE SYSTEM HAD TRIPPED, SEARCH AND RESCUE OF THE AREA FOUND NO VICTIMS. PERSONNEL BELIEVED TO BE IN THE HAZARD AREA WERE FOUND IN AN ADJACENT AREA, NOT AT RISK. FIRE DEPT. PERSONNEL SHUT DOWN THE CO2 SYSTEM AND EVACUATED ALL PERSONNEL TO A SAFE AREA OF THE BUILDING. ONE FIRE FIGHTER OVERCAME BY CO2 VAPORS WAS REMOVED BY FIRE DEPT. PERSONNEL TO THE BASE HOSPITAL, TREATED AND RELEASED. THE ESTIMATED \$ LOSS CONTENTS (GOVERNMENT) WAS DERIVED FROM THE AGENT LOSS (175 LBS) X LAST PRICE PAID FOR CARBON DIOXIDE.

APPENDIX C INADVERTANT OPERATION OF CO2 SYSTEMS NAVY SAFETY CENTER DATA, 1986

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22 JAN 91

SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA
JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE
TIME FRAME: JAN 86 THRU DEC 86
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 86012890800 (CONTINUED) ***

TELEPHONE NOTIFICATION WAS RECEIVED BY DIRECT LINE FROM MMS OPERATIONS CENTER IN THE USA BY THE CENTRAL ALARM ROOM OPERATOR AT 0825, STATING THE CO2 SYSTEM IN BUILDING 1414 HAD BEEN DUMPED AND TWO PERSONNEL WERE IN THE BUILDING. NO FIRE REPORTED. FIRE DEPARTMENT PERSONNEL WERE DISPATCHED IMMEDIATELY TO THE SITE, ARRIVING AT 0831. THEY STARTED IMMEDIATE VENTILATION OF THE BUILDING. THE TWO PERSONNEL IN THE BUILDING ESCAPED WITHOUT ASSISTANCE. THE CAUSE OF CO2 SYSTEM BEING DUMPED WAS TWO EMCS PERSONNEL WORKING ON THE ELECTRICAL PORTION OF THE FIRE PROTECTION SYSTEM CAUSED AN ELECTRICAL SHORT IN THE MANUAL PULL STATION CIRCUIT WHICH ACTIVATED THE SYSTEM. THE SYSTEM COULD NOT BE ABORTED. THE MAIN CO2 STORAGE TANK VALVE WAS NOT CLOSED PRIOR TO STARTING THEIR MAINTENANCE WORK. COST OF THE CO2 REPLACEMENT WAS \$1920.00, THE TANK CAPACITY IS 16000 POUNDS. EMERGENCY WAS TERMINATED AT 0905 BY THE ASSISTANT CHIEF ON DUTY. THE LAST VEHICLE RETURNED TO THE STATION AT 0917.

ID 86032571000

0002 RECEIVED REPORT OF A BROKEN CO2 LINE IN THE COURTYARD OF N-221. RESPONDED. VALVE CLOSED ON CO2 TANK TO BROKEN LINE. A RUPTURE OCCURRED IN AN ELBOW OF A 2 INCH SUPPLY LINE TO WIND TUNNEL. COST TO REPLACE CO2: \$1680.00 COST TO REPAIR LINE: \$6000. - \$8000.00. CAUSE: CORRODED PIPE. NASA.

STRUCTURE/MOBILE	CONTENTS	TOTAL	TYPE PROPERTY	INJ	DEATHS
VALUE: \$1,200,000	\$0	\$1,200,000		0	0
LOSS: \$0	\$0	\$0			

ID 86071590400

AT 1234 HOURS, RECEIVED REPORT BY CE DIRECT LINE OF A 5,000 LB. FREON LEAK AT BUILDING 1951, ENGINE TEST CELL. UPON ARRIVAL FOUND THAT THE CO2 SYSTEM HAD BEEN ACTIVATED EARLIER. INVESTIGATION REVEALED THAT CE ALARM MAINTENANCE WAS WORKING ON THE SYSTEM AT THE TIME OF ACTIVATION. THEY WERE SWITCHING THE BUILDING'S DETECTION SYSTEM OVER FROM THE OLD GAMEWELL CENTRAL RECEIVER TO THE NEW DIGITIZE CONTROL ALARM RECEIVER. THEY SHORTED OUT THE ZONES CAUSING THE CO2 TO DISCHARGE. WHEN IT STARTED DISCHARGING, ALARM MAINTENANCE PERSONNEL SHUT THE CO2 SYSTEM OFF. APPROXIMATELY ONE TON OF CO2 WAS DISCHARGED. AT A COST OF \$325.00 REPLACEMENT.

Aircraft Report

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FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA
 JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE
 TIME FRAME: JAN 86 THRU DEC 86
 PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 86111991700 (CONTINUED) ***

--- CASUALTY # 1 ---

CATGY: FIRE SVC (CIV) TYPE: ACTION SEV: INJURY AGE: 37 TIME: 1419 SEX: M SVC/AFF: NAVY
 COND BEFORE INJ: AWAKE, UNIMPAIRED
 ACTY AT TIME: IRRATIONAL ACTION
 NATURE OF INJ: NOT CLASSIFIED
 DISPOSITION: TAKEN TO OTHER THAN HOSPITAL

FAMILY W/STRUCT: OVER 1 YEAR
 COND PREV ESC: NO CONDITIONS PREVENTED ESCAPE, NOT A FACTOR
 CAUSE OF INJ: EXPOSED TO FIRE PRODUCTS
 PART BODY INJ: INTERNAL, INCLUDES RESPIRATORY SYSTEM/HEART

1407 RECEIVED A REPORT OF CO2 DISCHARGE AT N-227D NASA TWO ENGINE COMPANIES, ASS'T CHIEF AND THE FIRE CHIEF RESPONDED. 0
 N SCFNE, FIRE CAPTAINS OFF BOTH ENGINES AND TWO FIREFIGHTERS DONNED BREATHING APPARATUS AND FOLLOWED REPORTING PARTY TO
 AREA OF INVOLVEMENT. REQUESTS SAFETY SPECIALIST WITH OXYGEN DEFICIENCY MONITOR. PRIOR TO ENTRY F D PERSONNEL CAUTIONED R
 EPORTING PARTY TO REMAIN OUTSIDE. ENGINE 22 CAPTAIN RETURNED TO BASEMNT AREA TO MAKE ENTRY INTO ENGINE ROOM. DOOR WAS S
 ECURED AND WAS SUSPECTED AS FIRE ORIGIN. FIREFIGHTER WAS ON STANDBY WITH A CO2 EXTINGUISHER ENTRY WAS MADE, NO VISIBLE F
 IRE OF SMOKE BUT EXTREME HEAT. FIRE DEPARTMENT NASA PERSONNEL AT TOP OF STAIRS. ENGINE 22 CAPTAIN REPORTS ENGINE 24 CAPT
 AIN IS DOWN, FIRST AID BEING GIVEN. F D CONTINUE TO MAKE SWEEP OF AREA TO DETERMINE CAUSE. CAPTAIN TRANSPORTED TO DISPEN
 SARY CAUSE OF ALARM: FLANGE FAILURE ON PIPING SYSTEM. ESTIMATED DAMAGE \$960.00. CASUPLY 2 UPON EXITING AREA CAPTAIN REMO
 VED HIS MASK TO DIRECT NASA PERSONNEL OUT OF AREA. NATURE OF INJURY WAS CO2 INHALATION COMBINED WITH HYPERTENSION.

GEN RESEARCH LAB. 140,000 lb CO2(?)

APPENDIX C INADVERTANT OPERATION OF CO2 SYSTEMS NAVY SAFETY CENTER DATA, 1987

PAGE: 75

SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR, LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 87 THRU DEC 87

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

22 JAN 91

RECORD ID: 87041090500 (CONTINUED) ***

THIS INCIDENT WAS NOT A FIRE. AT 2056 HOURS, A CODED FIRE ALARM SIGNAL WAS RECEIVED BY THE FIRE DEPARTMENT COMMUNICATIONS CENTER FROM BUILDING 914, ASIF FUEL METERING. EQUIPMENT AND PERSONNEL RESPONDED TO THE SCENE AT 2059 HOURS. ON ARRIVAL, THERE WERE NO EXTERNAL SIGNS OF SMOKE OF FIRE. PERSONNEL AT THE FACILITY REPORTED THAT A STEAM LINE IN THE FACILITY WAS LEAKING. AS THE FIRE DEPARTMENT WAS ABOUT TO ENTER THE BUILDING, THE CO2 FIRE SUPPRESSION SYSTEM ACTIVATED. AFTER ENTERING THE BUILDING, IT WAS DISCOVERED THAT TWO SMOKE DETECTORS AND ONE FLAME DETECTOR HAD ACTIVATED. AFTER FURTHER INVESTIGATION, IT WAS DETERMINED THAT THE FLAME DETECTOR HAD MALFUNCTIONED CAUSING THE SUPPRESSION SYSTEM TO ACTIVATE. A WORK REQUEST HAS BEEN SUBMITTED TO HAVE A NEW FLAME DETECTOR INSTALLED TO REPLACE THE FAULTY DETECTOR THAT ACTIVATED. THE FAULTY DETECTOR HAS BEEN REMOVED AND THE FIRE SUPPRESSION SYSTEM IS BACK IN SERVICE. \$195 CONTENTS LOSS IS NOT DUE TO FIRE.

3000 # CO2

ID. 87030591500

2133: RECEIVED A REPORT OF A CO2 DISCHARGE AT N-2270. ON SCENE CO2 HAS BEEN DISCHARGED. PERSONNEL DON AIR PACKS AND ADHERE TO THE BUDDY SYSTEM. CLOSE THE VALVE ON THE CO2 TANK. NASA SAFETY SPECIALISTS ON SCENE, READINGS ARE AT 10%, EXHAUST FANS BEING SET UP TO CLEAR THE AREA. SECOND SET OF READINGS COMPLETED, SAFETY SPEC.S CONFIRM 21% ATMOSPHERE. PROBABLE CAUSE/BRINGING TUNNEL UP ON LINE, CAUSED CO2 TO DISCHARGE. (6000 pounds)

General Research Laboratory (Wind Tunnel?)

RECORD ID: 87042391600 (CONTINUED) ***

--- CASUALTY # 1 ---
CATGY: FIRE SVC (CIV) TYPE: ACTION SEV: INJURY AGE: 41 TIME: 0832 SEX: M SVC/AFF: NAVY FAMILY W/STRUCT: 1 TO 2 MONTHS
COND BEFORE INJ: AWAKE, UNIMPAIRED
COND PREV ESC: NOT CLASSIFIED
CAUSE OF INJ: NOT CLASSIFIED
ACTY AT TIME: NOT CLASSIFIED
NATURE OF INJ: NOT CLASSIFIED
PART BODY INJ: INTERNAL, INCLUDES RESPIRATORY SYSTEM/HEART
DISPOSITION: TAKEN TO HOSPITAL BY FD VEHICLE

AT 0745 THE FIRE CHIEF AND ONE ON-DUTY FIREFIGHTER WERE IN BUILDING ASSISTING FACILITIES MANAGEMENT PERSONNEL IN REMOVAL OF A CO-2 SYSTEM HOSE REEL FROM ONE OF THE DATA PROCESSING AREAS. PRIOR TO REMOVAL OF THE REEL, F.D. PERSONNEL DISCONNECTED BOTH THE MAIN AND RESERVE CO-2 BANKS (TOTAL OF 8 BOTTLES). AFTER REEL WAS REMOVED, FIREFIGHTER BEGAN RECONNECTING THE CO-2 BOTTLES IN ORDER TO PLACE REELS BACK IN SERVICE. AFTER CONNECTING THREE BOTTLES HE AS ATTEMPTING TO CONNECT THE FOURTH BOTTLE WHEN THE MAIN BANK ACTIVATED, SENDING CONTENTS OF THREE BOTTLES OUT OF HOSE THAT FIREFIGHTER WAS ATTEMPTING TO CONNECT. MASSIVE DISCHARGE OF CO-2 BLEW THE FIREFIGHTER INTO A TABLE AND HE WAS RENDERED UNCONSCIOUS SHOCK OF IMPACT AND HIGH CONCENTRATION OF CO-2. CO-2 DISCHARGE CAUSED SECTION OF THE CEILING TO COLLAPSE AND CAUSED DAMAGE TO WALL BEHIND CO-2 BANK. INJURED FIREFIGHTER WAS RESCUED FROM TWO FACILITIES MANAGEMENT WORKERS FIVE OTHER CIVILIAN PERSONNEL FLE UNASSISTED. F D RECEIVED AN AUTOMATIC ALARM AT FIRE STATION, UPON ARRIVAL FOUND INJURED FIREFIGHTER REGAINING CONSCIOUSNESS; REQUESTED A PARAMEDIC UNIT AND AN AMBULANCE FROM PRICE GEORGE'S COUNTY. VENTILATED AREA OF REMAINING CO-2. INJURED FIREFIGHTER WAS TRANSPORTED TO HOSPITAL HE WAS ADMITTED FOR TREATMENT OF A COLLAPSED LUNG AND POSSIBLE PNEUMONIA. A MISCOSWITCH ON ONE OF THE OTHER CO-2 HOSE REELS THAT WAS TEMPERED WITH BY A PERSON OR PERSONS UNKNOWN AS BEING THE CAUSE OF THE INADVERTENT DISCHARGE.

Computer Rm - Physical Damage and Personnel Injury.

APPENDIX C INADVERTANT OPERATION OF CO2 SYSTEMS NAVY SAFETY CENTER DATA, 1988

PAGE: 22

22 JAN 91

SHORE FIRE MANAGEMENT REPORT

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 88 THRU DEC 88

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 88091691200 (CONTINUED) ***

F D RECEIVED FIRE BOX FOR BUILDING #1490. RESPONSE CONSISTED OF TWO 1000 GPM PUMPERS WITH A CREW OF FOUR EACH, ASST. F C IN TAU VEHICLE AND A FIRE INSPECTOR. INVESTIGATION REVEALED FIXED SYSTEM CO2 HAD ACTIVATED DUE TO A MALFUNCTION IN THE FIRE ALARM CONTROL PANEL 1100 LBS OF CO2 WAS ACCIDENTALLY RELEASED. DUE TO THE EQUIPMENT SHUT-DOWN A TELEX 6350 DISC DRIVE COMPUTER WAS DAMAGED. F D PERSONNEL CONDUCTED AIR SAMPLE MONITORING IN THE COMPUTER TO ENSURE THE AREA WAS SAFE FOR HUMAN REENTRY. NOTE THE SAME CO2 SYSTEM HAD ACTIVATED AUTOMATICALLY TWO WEEKS EARLIER, BUT WITHOUT ANY RESULTING DAMAGE. THE PUBLIC WORKS DEPARTMENT IS PRESENTLY COLLECTING ESTIMATES TO REPLACE THE OVERLOADED AND OUTDATED FIRE ALARM CONTROL PANEL.

Electronic Equipment Room

VALUE:	NOT REPTD	\$0	\$0	\$0	0	0
LOSS:	\$400,000	\$0	\$400,000	\$0	This loss was not a consequence of The CO2 fire.	
ID 8806104060						

AT 22:14, FD RESPONDED BUILDING 372 ENGINE TEST CELL. UPON ARRIVAL FD FOUND THAT THERE WAS A FIRE IN A JET ENGINE IN TEST CELL #14 WHICH HAD BEEN EXTINGUISHED BY HALON & CO2 FIXED SYSTEMS. AT THIS TIME ESTIMATED VALUE LOSS AND CAUSE ARE BEING INVESTIGATED.

Against Repair Facility Halon (to #) CO2 (3000#)

FIGURE C
INADVERTANT OPERATION OF CO2 SYSTEMS
NAVY SAFETY CENTER DATA

SHORE FIRE MANAGEMENT REPORT

PAGE: 4

22 JAN 91

FOR OFFICIAL USE ONLY

JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 89 THRU DEC 89

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 89021691700 (CONTINUED) ***

F D RECEIVED FIRE BOX FOR BUILDING W1490. RESPONSE CONSISTED OF TWO 1000 GPM PUMPERS WITH CREWS OF FOUR EACH, ACTING ASST
. CHIEF IN COMMAND POST VEHICLE, F C AND FIRE INSPECTOR. INVESTIGATION REVEALED FIXED CO2 SYSTEM HAD ACTIVATED DUE TO A
MALFUNCTION IN THE FIRE ALARM CONTROL PANEL OR A POSSIBLE LEAK IN THE COMPUTER ROOM. 1100 LBS OF CO2 WAS ACCIDENTALLY RE
LEASED THROUGHOUT THE STRUCTURE DUE TO A FAILURE OF THE AIR HANDLERS NOT SHUTTING DOWN. INDUSTRIAL HYGIENIST AND FIRE IN
SPECTOR CONDUCTED AIR SAMPLE MONITORING IN THE FACILITY. ALL NON-FIREFIGHTING PERSONNEL EVACUATED FROM FACILITY IMMEDIATE
LY. AT 1616 F D SECURED SCENE RETURNED AT 1900 HOURS TO RESUME AIR SAMPLE MONITORING TO ENSURE THAT FACILITY WAS SAFE F
OR HUMAN REENTRY. LATER DETERMINED THAT WITH THE CO2 SYSTEM RELEASE SWITCH BEING IN THE RESERVE MODE, AIR HANDLER UNITS
ARE NOT DESIGNED TO SHUTDOWN.

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JOB NUMBER: R0511EA

JOB TITLE: REPORT FOR DR. LEVINE FIXED SYS W/ DMAGE

TIME FRAME: JAN 89 THRU DEC 89

PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

SHORE FIRE MANAGEMENT REPORT

PAGE: 33

22 JAN 91

RECORD ID: 89121490300 (CONTINUED) ***

--- CASUALTY # 1 ---

CATGY: MILITARY PERS TYPE: ACTION SEV: INJURY AGE: 29 TIME: 2246 SEX: M SVC/AFF: NAVY FAMLY W/STRUCT: 3 TO 6 MONTHS
COND BEFORE INJ: AWAKE, UNIMPAIRED
ACTY AT TIME: NOT CLASSIFIED
NATURE OF INJ: NOT CLASSIFIED
DISPOSITION: TAKEN TO HOSPITAL BY NON-FD VEHICLE

--- CASUALTY # 2 ---

CATGY: MILITARY PERS TYPE: ACTION SEV: INJURY AGE: 26 TIME: 2246 SEX: M SVC/AFF: NAVY FAMLY W/STRUCT: 3 TO 6 MONTHS
COND BEFORE INJ: AWAKE, UNIMPAIRED
ACTY AT TIME: NOT CLASSIFIED
NATURE OF INJ: NOT CLASSIFIED
DISPOSITION: TAKEN TO HOSPITAL BY NON-FD VEHICLE

AT 2245 F D RECEIVED CALL OF A BOMB SCARE IN BUILDING 437, A FIRE RESISTIVE STRUCTURE. WHILE ENROUTE BASE POLICE MISTAKE
NLY PULLED MANUAL PULL STATION THINKING IT WOULD ACTIVATE INTERNAL ALARM SYSTEM TO EVACUATE STRUCTURE. ALSO CHARGED CO2
HOSE REEL SYSTEM. SYSTEM FLOODED BASEMENT HALLWAY WITH CO2 (NO EXPLAINED REASON) TWO NAVY PERSONNEL WERE OVERCOME WITH
CO2. ESCORTED FROM BUILDING. TRANSPORTED TO BASE HOSPITAL BY BASE AMBULANCE.

He named - School

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APPENDIX C
INADVERTANT OPERATION OF CO2 SYSTEMS
NAVY SAFETY CENTER DATA - 1990

FOR OFFICIAL USE ONLY
JOB NUMBER: R0511EA
JOB TITLE:

SHORE FIRE MANAGEMENT REPORT

PAGE: 45

06 DEC 90

TIME FRAME: JAN 90 THRU DEC 90
PREPARED BY: AVIATION/SHORE BRANCH, NAVSAFECEN

RECORD ID: 90G32590600 (CONTINUED) ***

AT 0906 HOURS, RECEIVED REPORT VIA CIVIL ENGINEERING SERVICE CALL NUMBER OF STEAM OR CARBON DIOXIDE COMING FROM UNDERNEATH THE BOILER ROOM DOOR OF BUILDING T-1421 (NAVY WEAPONS STORAGE AREA). ON ARRIVAL FOUND TWO CARBON DIOXIDE BOTTLES DISCHARGED. INVESTIGATION SHOWED THAT A MAINTENANCE WORKER WENT TO CHECK PORTABLE GENERATOR TO THE BUILDING DUE TO A POWER OUTAGE. UPON CHECKING BOILER ROOM LIGHTS, TO CONFIRM POWER OUTAGE, HE ACCIDENTALLY ACTIVATED CARBON DIOXIDE DISCHARGE SWITCH. WHEN POWER WAS TURNED ON, TWO CARBON DIOXIDE BOTTLES IMMEDIATELY DISCHARGED. VIDEO EQUIPMENT WAS NOT USED DUE TO NATURE OF EMERGENCY.

RECORD ID: 90C516910G0 (CONTINUED) ***

AT 1654 HOURS, THE FIRE ALARM CENTER RECEIVED A CALL FROM BUILDING 1026, U.S. NAVAL SUPPLY COMPOUND WAREHOUSE. TWO 1000 GPM PUMPERS AND THE DUTY ASSISTANT FIRE CHIEF RESPONDED. UPON ARRIVAL, SPRINKLER SYSTEM WATER GONG ON NORTH END OF THE BUILDING WAS ACTIVATING. NO FIRE WAS DETECTED, HOWEVER, ONE SPRINKLER HEAD HAD ACTIVATED. SPRINKLER SYSTEM WAS SECURED AT THE POST INDICATOR VALVE. ESTIMATED DAMAGE WAS \$50.00 FOR CARDBOARD BOXES AND BAGS AS PER U.S. NAVAL SUPPLY DEPOT.

RECORD ID: 90061090100 (CONTINUED) ***

AT 2329 HOURS, 10 JUNE 1990, THE FIRE DEPARTMENT DISPATCHER RECEIVED A FIXED ALARM NO. 361 FOR BUILDING NO. 1099. ENGINE COMPANIES NO. 4, NO. 1 (WITH A CREW OF FOUR EACH), SQUAD NO. 1 (WITH A CREW OF TWO) AND DISTRICT CHIEF RESPONDED. UPON ARRIVAL THE FIRE OFFICER OF ENGINE COMPANY NO. 4 AND DISTRICT CHIEF FOUND ALARM ACTIVATED IN ZONE NO. 6 NEWTS LAB. IN THIS AREA, IT WAS DISCOVERED THAT THE CARBON DIOXIDE FLOOD SYSTEM HAD BEEN ACTIVATED EMPLOYING THE MAIN BANK OF CYLINDERS INTO ROOM NO. 109 A-1. FURTHER INVESTIGATION FOUND AN ELECTRICAL SHORT HAD OCCURRED AT A MULTIPLE PIN ELECTRICAL CONNECTOR AT STUDENT STATION NO. 4. GOVERNMENT LOSS REFLECTS THE LOSS OF \$200.00. FIRE DEPARTMENT PERSONNEL AND EQUIPMENT WERE SECURED AT 0033 HOURS.

Don't forget to check

RECORD ID: 90C71091200 (CONTINUED) ***

0034: VIA TIE LINE, NASA DUTY OFFICE REPORTING A CO2 DISCHARGE AT N-227D. 0037: ENGINE 20, ENGINE 24, AND ASSISTANT FIRE CHIEF RESPONDING. 0039: ALL UNITS ON SCENE. INVESTIGATION REVEALED THAT A GROUNDING WIRE HAD FALLEN IN THE ELECTRICAL VAULT WHICH SHORTED OUT AND CAUSED THE CO2 SYSTEM TO DISCHARGE 3 TONS OF CO2 IN THE MOTOR HOUSE. CO2 TANK CAPACITY IS 4 TONS. NO FIRE PRESENT. ESTIMATED COST OF CO2 \$720.00. NO DAMAGE PRESENT.

General Reserve - 46

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10. SUPPLEMENTARY NOTES

11. ABSTRACT (A 200-WORD OR LESS FACTUAL SUMMARY OF MOST SIGNIFICANT INFORMATION. IF DOCUMENT INCLUDES A SIGNIFICANT BIBLIOGRAPHY OR LITERATURE SURVEY, MENTION IT HERE.)

Records of the Navy Safety Center, Norfolk, VA were reviewed to find data relevant to inadvertant operation of installed Fire Extinguishing Systems in civilian Nuclear power plants. Navy data show the incidence of collateral fire or other damage by fresh water on operating electrical equipment in submarines, and in shore facilities is about the same as the civilian experience, about 30%. Aboard surface ships, however, the collateral damage incidence is much lower, about 15%. With sea water, the collateral damage incidence is at least 75%. It is concluded that the fire extinguisher water has to be contaminated, as by rust in sprinkler systems or deposited salt spray, for most collateral damage to occur.

Reasons for inadvertant operation (or advertant operation) of firex systems at shore facilities, submarines, and surface ships resemble those for nuclear power plants. Mechanical or electrical failures lead the list, followed by mishaps during maintenance. Detector and alarm system failures are significant problems at navy shore facilities, and significant at nuclear power plants. Ships and submarines have few automatic firex systems, so this kind of failure is not significant. The Navy depends on trained firefighters to intervene. Prompt action with a portable CO2 extinguisher is usually effective.

Fixed halon and CO2 systems in shore facilities cause no collateral damage. Lists of individual Navy incidents with water and with halon and carbon dioxide are included as appendices to this report.

12. KEY WORDS (6 TO 12 ENTRIES; ALPHABETICAL ORDER; CAPITALIZE ONLY PROPER NAMES; AND SEPARATE KEY WORDS BY SEMICOLONS)

carbon dioxide; collateral damage; electrical equipment; firex; halon; water

13. AVAILABILITY

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